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ABSTRACT

To summarize practice in the organization and administration of non-book materials in libraries and to suggest modifications for Australian practice, this guide comprises a procedure manual for handling non-book materials and services in college of advanced education libraries. Sections of the guide cover the range of materials and equipment to be considered; their selection, acquisition, and preparation; bibliographic organization; storage; circulation; equipment; and accommodation. Additional sections detail the various types of non-book materials available and suggest methods for "selling the service" by the librarian. A list of manufacturers, distributors, and sources of information is also included, as well as a selected and annotated bibliography. (SH)

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A GUIDE TO THE PRACTICE OF NON-BOOK LIBRARIANSHIP

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P. T. McNALLY

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A GUIDE TO THE PRACTICE OF NON-BOOK LIBRARIANSHIP

A manual for the organization and administration of non-book materials and services in college of advanced education libraries.

Prepared under the terms of an Educational Research Grant sponsored by the Commonwealth Advisory Committee on Advanced Education.

by

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PREFACE

This **Guide to the practice of non-book librarianship** comprises a procedure manual for the organization and administration of non-book collections and services in college of advanced education libraries.

Funds necessary for the preparation of this work were provided by an Educational Research Grant made by the Commonwealth Minister for Education and Science on the recommendation of the Commonwealth Advisory Committee on Advanced Education.

The major purpose in preparing the manual was to summarize overseas practice in the organization and administration of non-book materials in libraries and to suggest modifications for Australian practice. It is hoped that through the preparation of this work some of the duplication of effort which would occur as many colleges simultaneously begin to develop collections of non-print media will be avoided.

During the course of the investigation discussions were held with librarians and experts in the production and use of audiovisual materials working in colleges of advanced education, teachers' colleges, universities, schools and State Departments of Education. Discussions were also conducted with manufacturers of materials and equipment and marketing organizations involved in audiovisual media. Information was also sought and received from a large number of overseas and Australian sources I was unable to visit.

To the many people who assisted through their discussions and correspondence, I would like to express my gratitude.

A survey of the literature since 1965 was conducted as a basic element in the investigation. Items from the survey which are considered to have relevance for college librarians developing non-book collections and services are listed in the 'Selected and Annotated Bibliography'.

The preparation of a work such as this is impossible without a great deal of assistance. I was fortunate that so many persons were willing to give of their time and advice and to them all I would like to express my thanks.

I owe special thanks to Mr. S. Page, Deputy University Librarian, University of Queensland, for the encouragement he gave and for his valuable criticisms, Mr. L. J. Barker, Director, Darling Downs Institute of Advanced Education for his interest in the work and his encouragement, my wife, Margaret McNally, for her willingness to assist whenever possible, and Mrs. B. Bennett who undertook the secretarial duties associated with the work.

Paul McNally,

Darling Downs Institute of Advanced Education.

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I

THE RANGE OF MATERIALS AND EQUIPMENT

An extensive and rather confusing range of non-book materials and audiovisual equipment is currently available and is in a constant state of flux as new forms are added and others phased out. Because of the extent of the range of materials available it is useful to group them in broad categories and for this purpose the three categories given in **Guidelines for Audio-Visual Services in Academic Libraries** (1) have been used with the addition of a fourth category, "Three dimensional materials", and a fifth category, "Kits". Media designations used for materials are those employed in **Non-book materials** (2) in which explanations of the terms used are given.

Materials	Equipment
1. Projected materials	
a. Still pictures	
opaque materials	episcope
transparencies	overhead projector
slides	slide projector slide viewer
filmstrips	filmstrip projector (often combined with slide projector) filmstrip viewer
microforms (microfilm, microfiche, micro-opaques)	microfilm reader microfilm reader-printer microfiche reader microfiche reader-printer microcard reader
b. Motion pictures	
16 mm films	16 mm projector
8 mm (standard and super—sound and silent—open reel, motion picture loops, cartridges)	8 mm projector designed for specific format
2. Recorded materials	
phonodiscs	record player
phonotapes (open reel and cassette)	tape recorders tape players

video recordings (currently open reel tape, but cartridged tapes and other formats are being developed)	video-tape recorder/ player

3. Graphic materials
   - study prints
   - art prints
   - charts
   - pictures
   - maps

4. Three-dimensional materials
   - dioramas
   - models
   - realia

5. Kits
   - games
   - kits (combinations of two or more media)
   - laboratory kits

equipment from the above range may be required

Hicks and Tillin [3] offer an alternative range of broad categories under which materials may be grouped — still-projection materials, motion-projection materials, audio materials, flat graphic materials, three-dimensional materials and programmed materials.

No guidelines are yet available for colleges of advanced education to determine the quantitative extent of a collection of non-book materials desirable, but the table of basic stock for a university library presented by Cornelius [4] provides a good starting point.

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II

THE PLACE OF THE NON-BOOK COLLECTION AND AUDIOVISUAL SERVICE WITHIN THE ADMINISTRATIVE STRUCTURE OF THE COLLEGE

A basic issue to be faced by any college intending to develop a collection of non-book materials and an audiovisual production service is that of deciding where the collection and the service should be located within the organization of the college. Centralization in the library of non-book materials owned by the college is strongly recommended. Boddy has carefully surveyed the literature concerned with the centralization of audiovisual materials in the college library and reports that there is one fact upon which librarians and audiovisual specialists agree and "that is that there should be centralization of materials". (1) Centralization is essential for economy as it ensures materials are not unnecessarily duplicated by departments and that they are available for use by the widest possible range of potential users. If non-book materials are stored in departments or in the offices of faculty members they will often be unavailable when required by a user even if they are recorded in the central catalogue of the library. If they are stored as a collection at a location separate from the library their potential as sources of information for students and staff is seriously limited. The library is the traditional centre for the information requirements of staff and students. It is the college facility to which they come in anticipation of fulfilling information needs. Dr. C. Walter Stone commenting on a trend he observed in United States schools, colleges and universities of maintaining separate administrative units each concerned with various aspects of educational media says, "The present degree of separatism among the media service units does not serve education well. The requirements of modern instruction call for the immediate availability for use singly or in any combination, the full spectrum of communications resources. including books, pamphlets, magazines and other forms of printed materials; pictorial and graphic materials; motion pictures; disc and tape recordings; television and teaching machines; research laboratories; computer facilities; demonstrations and displays, etc." (2)

Centralization of non-book materials in the library achieves what Dr. Stone sees as desirable for it results in a wide variety of information sources being available to meet the specific needs of individual users. Audiovisual materials serve much the same function as books for they provide a method of storing information. A library is an information store and it ceases to be effective in that role if it excludes some information solely on the grounds that it is not in book format.

When non-book materials are housed in the library, they are made as accessible to students and staff as are books. The circulation system can readily be adapted to cater for lending non-book materials and, where necessary, equipment. Accurate bibliographic records of non-book materials can be prepared by library staff and included in the catalogue of the library, and library personnel are available to assist students and staff to select and make use of the materials.

The expertise of library staff involved in selection and acquisition of books can be used for selection and acquisition of non-book materials. To duplicate these services elsewhere in the college to cater for non-book materials only is poor economics.

Westphal discusses at length the advantages of combining all types of learning and instructional materials in a library-materials centre (3) and reports that of 31 major junior colleges in Illinois surveyed, 64.5% allocated responsibility for the administration of audiovisual services to a library-materials centre. (4) He found a definite trend towards administration of audiovisual services by library-materials centres in the colleges established in the late 1950's and 1960's and a trend away from administration of audiovisual services by independent audiovisual departments. (5) He finds also that student enrolment and size of the campus also appear to be factors influencing decisions on the administration of audiovisual services.

Non-book materials, and in particular audiovisual materials, are often considered only in terms of their role as instructional media for group use. Their valuable role in individual study situations is frequently overlooked. For example, a set of 35 mm slides used for class instruction may be of considerable value to the student in his own private study as a means of revision of information presented in class or as a further source of information. The development of equipment specially designed for individual use has greatly broadened the potential of audiovisual materials for independent study purposes. Every item of non-book material held by a college must be considered in terms of its value both for group instructional purposes and for independent student study purposes. Housing the college's non-book materials in the library would seem to present the maximum opportunity for realising their full potential.

The problems associated with acquiring commercially produced non-book materials which meet precise curriculum needs of the college will force the establishment of an audiovisual production unit within most colleges. A key issue in establishing such a unit is whether or not it should be a department within the library. The roles of both a library and an audiovisual production unit are closely related for both exist to provide information resources. Christensen finds many theoretical advantages in having a centralized audiovisual service under the administration of the library. He finds that "it represents good administrative organization, for it fixes responsibility in one department and avoids the confusion and overlapping of separate agencies". (6)

McIntyre points out that although probably the majority of librarians consider that "the librarian has no significant role as a producer of materials, except possibly those directly related to his own specialty . . . some libraries are assuming this role, and recent literature suggests the future will see it extended". (7)

In the United States many college and university libraries have acquired titles such as Instructional Materials Centre, Educational Resources Centre and Resource Materials Centre to emphasise the

changing role of the library in an educational institution. This trend can also be observed in Australian colleges of advanced education. The use of these new titles emphasizes the changing role of the contemporary college library which in addition to providing a comprehensive collection in a wide variety of media also includes the facilities for the production of materials in non-print media. Knapp provides a comprehensive review of the literature documenting the relationship between the library and the audiovisual production department as revealed in the organizational practices of a number of colleges and universities. (8) Holly and Carnahan (9) describe in detail the development of a new multi-media library at Evergreen State College which incorporates the media production facilities in the library. Their paper deserves serious consideration by Australian college librarians. The instructional materials centre is defined by Ruark as "that system of functions and processes which help the learner to learn, and the teacher to teach, through provision of learning materials of any type as demanded". (10)

It seems sound educational practice for the library not only to provide materials which are already available, but also to include facilities for the production of materials which do not exist, but which are required to support the teaching programme. Materials can thus be created which are designed to serve specific instructional functions. The library which accepts this extended goal becomes vital to the whole educational enterprise of the college.

For the faculty member, a library which has an audiovisual production department is a one stop source for many of his teaching requirements. If audiovisual materials required for a class presentation are not already available in the library's collection, arrangements for their production can be made quickly. The inclusion of the college audiovisual production department within the library organization can be supported on other grounds as well. It results in close co-ordination between the library and the audiovisual department. The audiovisual department is on hand to produce materials for the library if the need arises. All materials produced are automatically library materials and a decision on whether or not to include them in the permanent collection is one for the librarian to make. Maximum possible utilization of audiovisual materials produced by the college is ensured. As a college library acquires more and more audiovisual materials and equipment, maintenance requirements increase greatly. The library which incorporates the college audiovisual production unit will be at a clear advantage. Economies will be achieved as there will not be the need to duplicate technical staff and repair facilities in the library. The integration of the audiovisual department and the library into one administrative unit ensures a co-ordination of resources and effort and enhances the potential contribution each can make to the educational enterprise of the college.

When each functions as a separate department within the college, there exists always the possibility of competition for available funds with its attendant souring of relations and of unco-ordinated ventures.

Levett reporting on college and university libraries which he visited in America remarks, "the highest morale and most effective use of resources occurred on those campuses where the Media Centre was housed either in the Resource Materials Centre or in conjunction with one of the media-oriented specialist offices. Where the Media Centre was operating independently, there tended to be a devaluation of its role and potential with a predictable degree of internecine rivalry between the two or more factions involved and a considerable degree of otherwise avoidable duplications in expenditure on staff, materials, accommodation and processes". (11)

It should be clearly understood that incorporation of the audio-visual department into the general framework of the library does not intimate that librarians will be expected to undertake the technical duties associated with such a department. Nor does it intimate that the general administration of the combined enterprise will necessarily be the responsibility of the college librarian. It is clearly necessary to employ personnel capable of producing materials at professional standard in whatever media the available facilities permit and also technical staff adequately trained to select and maintain equipment.

While the actual director of the organization need not necessarily be a librarian, he should insist on a library type of organization of the collection with a common approach for all media in acquisitions, cataloguing and service to users. Because such an approach is necessary, it would seem advantageous to have a librarian as director, but as Dupuy points out "only if the librarian and his staff are flexible and non-traditional in their outlook and are willing to admit that other media of information presentation can be just as important to education as the book. Fortunately, because of the generalist approach of most librarians, their background would seem to enable them to adapt more readily than is the case with many other scholars and specialists intimately connected with higher education. This is an additional reason why librarians with a practical attitude and an open mind are perhaps best suited to direct and to operate in the learning centre environment". (12)

In organizing the administration of a library which includes the audiovisual services of the college and which we may, for the sake of simplicity, refer to as a Resource Materials Centre, there are two key appointments, the audiovisual librarian and the co-ordinator of audiovisual services. The audiovisual librarian is responsible for the acquisition of audiovisual materials commercially available, for the development of a collection of audiovisual materials reflecting the curricula needs of the college, for the bibliographic organization of materials acquired and for establishing a programme of evaluation of materials obtained for review and possible acquisition. He also provides professional assistance to faculty and students. The co-ordinator of audiovisual services, because of the nature of the duties which he must undertake, would have professional expertise in the production of materials and would assume responsibilities of a technical nature.

These would include the selection and supervision of technical staff, supervision of the production of materials, establishment of procedures for the evaluation and selection of equipment and for the regular maintenance of equipment acquired, and instruction of faculty and students in the use of equipment. All audiovisual equipment for use within the college should be acquired through the audiovisual department, thus making use of the expertise of its staff. The audiovisual department should register all equipment and record the location of equipment sited outside the Resource Materials Centre in classrooms and other situations throughout the college.

While the audiovisual librarian assists in the selection of materials to meet specific instructional needs and the co-ordinator of audiovisual services instructs staff in the use of equipment available and creates material to meet specific teaching requirements of staff, it does not necessarily follow that faculty will enthusiastically accept audiovisual media for instructional purposes.

McIntyre points out, "Learning materials and media, including print oriented ones, are frequently best used in some optimal combination. It follows therefore, that pedagogical and psychological analysis of learning tasks is needed before instructional media can be designed for various aspects of these tasks. It follows further, that all significant media should be available for use, and used according to the manner in which the instructional characteristics of the media relate to the instructional task and without reference to particular prejudices or enthusiasms of the staff.

The relative efficiency of various instructional resources in terms of teaching effectiveness will depend upon the manner in which the materials are prepared, presented, and used. Again, it follows that pedagogical and psychological analysis is required and that systematic research involving careful quantifiable evaluation is essential.

Thus the Resource Materials Centre has implicit in its assumptions, but rarely made explicit or adequately planned for, not only the full range of instructional technology as techniques but, much more importantly, the underlying bases of psychology, pedagogy and psychometrics. Without these, 'Instructional Technology' is likely to be a collection of gadgets". (13)

There is need to establish within a Resource Materials Centre a unit which is staffed by professional educators well conversant with educational psychology and teaching methods and which will assist faculty to select and utilize media which will best help them to accomplish the learning goals which they have defined. Such a unit it seems, has two major tasks —

(a) To bring to the notice of faculty those audiovisual media, which if used may result in more rewarding teaching, and to encourage them to investigate its potential and experiment in its use; and

(b) To assist faculty to define teaching objectives and to design strategies and techniques which take account of psychological principles and all available instructional methods and aids.

This advisory unit must work in close liaison with the audiovisual librarian who will assist in the selection of materials from the collection to meet the specified requirements of particular situations, and with the co-ordinator of audiovisual services who will ensure that the instructional strategies and techniques devised are made possible through the production of any materials necessary and through making use of the available facilities.

McIntyre (14) reported in 1967 on a planned office of instructional resources at the University of Illinois at Chicago Circle. It was planned to have two functional groupings within the office, the Instructional Systems Group which is concerned with instructional design and evaluation, and the Production and Services Group which provides the services associated with an Instructional Materials Centre. The Instructional Systems Group performs the following tasks —

1. Assisting the faculty in redesigning courses by carefully defining specific objectives, devising instructional groupings and activities and selecting teaching methods and media;

2. Assistance to faculty in writing programmed instruction for courses and in locating and using programmed materials from outside sources;

3. Assisting faculty in the evaluation of learning through test scoring, item analysis, data interpretation, test construction and information about standardized subject-matter tests.

The Production and Services Group undertakes tasks associated with the production and distribution of television presentations, the operation of an audiovisual service and the provision of graphic art work for projects undertaken by the group and to provide service throughout the campus in this area.

At the Darling Downs Institute of Advanced Education, an Education Practices Unit was established in 1970 staffed by two professional educators with extensive background in tertiary teaching and with a thorough knowledge of contemporary educational psychology and teaching methods.

The Education Practices Unit is a department within the Resource Materials Centre which also includes the Library and the Audiovisual Instruction Department. The Education Practices Unit has functions similar to those of the Instructional Systems Group reported above, but it is also responsible for the conduct of in-service training courses for faculty. A considerable amount of consultative work is undertaken with individual faculty members, principally on course development and assessment procedures. The course of in-service training has now

developed into a full post-graduate course in tertiary education for which an appropriate award is made to those who successfully complete the course. A question that may well be asked is "Should the Education Practices Unit be part of the Resource Materials Centre?"

Experience at the Darling Downs Institute of Advanced Education has shown that the decision to establish the unit within the Resource Materials Centre was a wise one. It has resulted in close and constant contact between the Education Practices Unit and the Audio-visual Instruction Department so that together they can work to implement strategies designed by the Unit to meet specific instructional needs of faculty members. The Unit is also part of the central organ of the academic life of the college. As part of the Resource Materials Centre, it has a thorough acquaintance with the facilities available in the Centre and immediate access to all its staff so that the work undertaken can be accomplished with maximum efficiency. It is also able to maintain a neutrality, not possible if it were part of any teaching school within the college. This is considered an important advantage.

The foregoing discussion has revealed the bias of the writer towards an organization which incorporates the audiovisual services department, the library and an educational unit. Not all colleges will find the arguments provided for such an integrated organization sufficiently winning to establish a Resource Materials Centre type of organization. For those colleges developing the library and the audio-visual services as separate facilities, the recommendations on planning provided in **Guidelines for Audio-visual Services in Academic Libraries** prepared and published by the Audiovisual Committee of the Association of College and Research Libraries in the United States bear serious consideration. "If a separate audio-visual department has been established, close and continuing co-operation must be maintained between the librarian and the head of the audio-visual department. Each medium should be carefully considered to determine which facility will assume responsibility for its maintenance, and then located wherever maximum service can be given. The distribution and maintenance of all equipment, for example, should fall to the audio-visual department. The location, rental, distribution, and scheduling of films should also be a function of this department since the films and the equipment necessary for their viewing will need to be co-ordinated. Wherever classrooms are individually equipped with audio, projectors, and recording devices, the technical maintenance of these as well as of library equipment should be the responsibility of the audio-visual department. In general, where there is a separate audio-visual facility, the audio-visual resource collection should be housed in the library and integrated into the regular library collection; whereas equipment, its maintenance, and its distribution, should be the function of the audio-visual department. In like manner, direct services for the instructional program — preparation of transparencies, slides, and graphics — should be an operation of the audio-visual department". (15)

Where separate facilities are established, it is clearly necessary to delineate carefully the responsibilities of each department to prevent conflicts between the separate organizations. At the same time, co-ordination between library and audiovisual department is essential to ensure economy and efficiency so that the maximum use can be made of available materials and facilities without unnecessary duplication of equipment, materials or staff. Superficially the delineation of responsibility and the attainment of a co-ordinated and co-operative effort seems a simple task. In practice, problems that will arise may be less easy to solve than anticipated.

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III

SELECTION, ACQUISITION AND PREPARATION

For those college librarians who have already ventured into the acquisition of non-book materials three important matters will have been recognized very quickly, 1. the comparatively high cost of much of the material available commercially, 2. the lack of suitable selection aids, and 3. the relatively small amount of material suitable for use at the tertiary level of education.

The high cost of the material places considerable premium on careful selection while the lack of suitable aids makes it a difficult task. Although there is a large range of material available commercially, a great deal of it is not suitable for college use and particular care must be taken in selecting material to ensure that it meets the information and instruction needs of both students and academic staff. Dupuy comments in **Ferment in college libraries,** "probably the most unsatisfactory feature of this commercially available material, from the standpoint of the average professor, is that it limits his own flexibility in presentation. The individual instructor can rarely find non-book material which covers the matters which he wishes to cover in exactly the way in which he wishes to cover them". (1) No comprehensive selection aid such as **Choice** is available to the college librarian selecting non-book material. However several serial publications are available which in a limited way provide assistance in selection. **Library Journal** publishes reviews of phonorecordings in a section "On the Record" and School Library Journal reviews films in the section "Screenings". **Audiovisual Instruction** features a regular section "Materials in Review" and two indexes, "Index of Audiovisual Reviews" and "Index of Audio Reviews", which aid in the location of reviews in other educational periodicals. Since 1969 the frequency of the indexes has declined and the publication is now largely of interest for its many articles on various aspects of audiovisual education. **The Booklist,** published twice monthly, offers reviews of materials in several formats including 16 mm films, filmstrips, loop-films, and recordings. While all these publications are useful as selection aids, they do not provide a comprehensive guide either to all audiovisual materials available commercially or even to those that may be more suitable for college or university use. R. D. McDaniel in an article surveying audiovisual reviewing practices gave a bibliography listing nineteen journals which carry what may be considered a regular audiovisual review service. McDaniel is critical of the reviews provided by most of the publications included. He finds that "with few exceptions, they are critical only in a positive sense, evaluate most media forms, and display an inconsistent and inadequate bibliographic citation". (2) Janet French is critical of "the-hearts-and-flowers" approach evident in many reviews. She notes the failure of evaluators to take a critical approach to reviewing and to make adverse comments when these are deserved (3).

The Chief-Librarians of the Colleges of Advanced Education at a meeting in Canberra in May, 1971 recognised the lack of a suitable organization in Australia to review audiovisual materials and to publish

its findings and recommended to the Commonwealth Advisory Committee on Advanced Education (C.A.C.A.E.) "that a feasibility study on the establishment of a reviewing centre for audiovisual software at the C.A.E. (college of advanced education) level be undertaken". In a paper presented at that meeting John Levett, Chief Librarian of the Tasmanian College of Advanced Education, suggested that the C.A.C.A.E. establish a reviewing office. "The office would be responsible for securing review copies and farming these out to C.A.Es. for evaluation and review; it would then retain the review copy and publish the evaluation in a journal which would also function as input for a union catalogue. Review copies would be made available on 'inter-library' loan. The centre would be staffed by one professional and one clerk, and provided it had access to an offset printing facility could be accommodated in any one of our centres". Mr. Levett goes on to say that he ventures "to predict that the reviewing journal it produces would have wide support. It is significant", he says, "that compared to books the current availability of selection tools is in inverse proportion to the cost of materials". (4)

Mr. Levett's suggestion bears careful consideration by all C.A.E. librarians. Currently, college and university librarians receive little assistance in the selection of audiovisual materials and thus each must become his own reviewer of materials. This is a time-consuming and onerous task.

Since evaluative reviews of audiovisual materials are far from comprehensive, previewing and auditioning are the principal means at the librarian's disposal for assessing the value of available materials. To ensure consistent and objective assessment of materials obtained for previewing or auditioning, it is imperative that criteria for evaluation of the various types of audiovisual materals be developed. Several publications are available in which evaluation criteria are given and discussed. Erickson in his book, **Administering audiovisual services,** (5) provides general criteria for selection of audiovisual materials, criteria for selecting materials in particular formats, and criteria for selecting some types of equipment.

Criteria for selection will vary from medium to medium but will chiefly be concerned with the areas of content and technical proficiency.

Guidelines for audio-visual services in academic libraries offers librarians a guide to matters to be considered in developing criteria for evaluation. The following points to be considered when evaluating non-book materials are adapted from this publication. (6)

Content:

Clarity of objectives. What are the objectives of the production? How effectively have they been achieved?

Organization including arrangement and sequence of parts.

Appropriateness of treatment for the subject matter and the intended use including instruction level at which the material is aimed.

Does the presentation hold the viewer or listener's attention?

Is the material technically accurate, current, and authentic?

What bias, if any, is shown in the presentation. Bias may be of a social, political or religious character. Does the bias contribute to or depreciate from the effectiveness of the presentation?

Technical proficiency:

Aural criteria — editing, fidelity, narrative, music.

Visual criteria — exposure, focus, print quality, composition, movement, editing, special effects and colour.

The Educational Materials Centre at the University of Papua and New Guinea has been concerned with the development of criteria for the evaluation of educational materials for use in the schools and teachers' colleges in Papua and New Guinea. Question booklets have been prepared for use by evaluators in preparing descriptive profiles of materials in a wide range of media in a variety of subject areas. While the booklets have not been prepared with colleges of advanced education specifically in mind, they nevertheless provide college librarians with an excellent means of objectively evaluating materials and determining their value for specific requirements set by the college library or faculty.

In each booklet, series of questions are posed for the evaluator on seven major areas — basic data, description, context, organization, presentation, accompanying material and orientation. Sample answers accompany each question and a question is answered by selecting the answer which best applies to the material being described. A guide to the terms and phrases used in the booklets is provided to aid evaluators who may be uncertain of their meanings. By using the booklets, evaluators can achieve objective and consistent evaluations.

A publication of the Educational Materials Centre entitled **Preparing descriptive profiles; a manual for evaluators** (7) provides an outline of the system and a description of the procedures developed and is available from the Centre. Question booklets prepared to date are available at reasonable cost from the University of Papua and New Guinea Bookshop.

If a national organisation as outlined above were established to review audiovisual materials, the development of an effective system for evaluating materials would be essential. The procedures developed by the Educational Materials Centre, it is believed, would go a long way towards achieving this.

To assist library staff in the evaluation of materials and to relieve them of some of the burden of work it is recommended that an evaluation panel comprising professional library staff, academic staff and audiovisual technical staff be established from which evaluation groups can be formed to preview and audition material obtained for

review. The composition of groups would be determined by the subject content of the material being reviewed. At least one representative from each major subject area taught should be a member of the evaluation panel. For the evaluation groups to work effectively, it is imperative that evaluation criteria be defined. The development of criteria for evaluation is part of the larger process of developing a selection policy to guide the efforts of those whose task it is to decide what to buy. It would seem that in the interests of harmony between faculty and librarian and to ensure that the audiovisual materials collection is developed to support the teaching programme as strongly as possible, a selection policy should be developed as a joint effort of faculty and librarian. Hodges (8) suggests it should answer such questions as:

What types of materials will be emphasized?

What types of materials will not be purchased?

What are the general criteria for selection?

Who will participate in selection?

Who has final responsibility for acquisition?

The American Association of School Librarians in its publication **Policies and procedures for selection of instructional materials** (9) provides a sample policy statement which would prove a valuable aid to librarians framing a policy for selection of non-book materials. The publication is available free of charge from the Association at its headquarters, 50 East Huron Street, Chicago, Illinois, 60611.

The selection policy of the Northampton County Area Community College at Bethlehem, Pennsylvania (10) provides a suitable example of a selection policy developed for the needs of a junior college. It includes statements on the philosophy of library service at the college, the scope of the collection, responsibilities for selection, policies for selection, gifts and handling of complaints or reappraisals.

The need to preview or audition before selecting has already been raised. In Australia this is no simple matter as will soon be discovered when attempts are made to arrange the purchase of suitable materials. Most firms in Australia engaged in the sale of audiovisual materials are acting only as agents of overseas producers. As the range of materials is usually considerable and the capital outlay involved in having complete stocks of the materials in Australia substantial, most firms do not carry the full range of materials they sell. This often involves the librarian who wishes to purchase particular materials in a delay of several weeks or even months between the time of placing an order and receipt of the goods. It also means that some firms are not willing to import materials for inspection purposes on the chance of a sale. Librarians would be well advised to clarify the situation before requesting materials for inspection and possible purchase. They should obtain a definite undertaking from the supplier that they are under no obligation to purchase materials which they have inspected and found unsuitable for their needs.

Before arranging orders from any firm, it is recommended that a careful check be made of the services offered. The ability of a firm selling audiovisual materials to offer the following services is of importance to librarians —

(a) previewing or audition of materials prior to selection.

(b) regular reporting on materials ordered but not yet forwarded.

(c) repair facilities in the event of damage. This is important in the case of loop films, cartridged films and other materials which are presented in packaged formats.

(d) arrangements for the replacement of materials damaged in transit. Some firms do not accept responsibility for materials once they leave their premises. Some audiovisual materials are fragile and occasional damage can be expected.

(e) provision of a special service for materials required urgently. Some suppliers can arrange air freight of materials from the country of origin.

(f) regular circulation of catalogues of materials available.

Over the past few years, librarians in Australia have experienced much better service in the acquisition of books because of the development of library supply firms. In the main, the ones that have prospered have been those who offered the services that librarians require. These firms have tailored their services to the needs of librarians. Naturally these needs are not those of the general book-buying public and to survive the firms rely on the goodwill and support of librarians. Librarians require specific services from the suppliers of audiovisual materials. They should make their needs known to the suppliers and offer their support and goodwill to those firms prepared to offer the services required. They should also offer constructive criticism where necessary.

As some of the many publishers and suppliers of specific types of audiovisual materials are given in later chapters, at this stage a list of only those suppliers who tend to be able to supply a more general range of materials is provided. It is stressed that the suppliers listed are only some of the firms operating. At present there is no way of knowing the existence of firms which do not bring themselves to the attention of colleges by their own efforts. (I have had personal communication with each of these suppliers and in some cases have acquired audiovisual materials and equipment from them.)

L. & S. Educational Equipment,
76-84 Bay Street,
BROADWAY, N.S.W. 2007.
and
259 East Boundary Road,
EAST BENTLEIGH, Vict. 3165.

This firm is agent for a large number of producers of audiovisual materials of many types. Arrangements can be made for previewing and auditioning materials.

Clifford Audiovisual Pty. Ltd.,
49 Market Street,
SYDNEY, N.S.W. 2000
and
1 Whiteman Street,
SOUTH MELBOURNE. 3205

This firm tends strongly towards the supply of materials in visual formats.

Educational Media Australia,
201 Park Street,
SOUTH MELBOURNE, Vict. 3205

A large range of media particularly in visual formats is available including some materials suitable for college level use. Materials are available for preview.

Hawthorn Audiovisual Suppliers,
1 Waratah Avenue,
BURWOOD, Vict. 3125.

This firm acts as agents for several continental producers as well as for American and British producers.

It should be noted that some library supply firms will obtain audiovisual materials which are ordered from them.

The suggestion that audiovisual materials produced overseas should, where possible, be ordered directly from the manufacturer or through an agent resident in the country of manufacture bears consideration. Certainly the cost of materials so purchased more than likely will be considerably less than if they were purchased through a local supplier. However there are inherent problems in such arrangements —

the difficulty of obtaining materials for inspection,

the replacement of materials damaged in transit, and

the repair of materials damaged through use.

For materials which are highly recommended in the few selection aids available and which are in formats unlikely to sustain damage in transit, purchasing directly from the overseas manufacturer is a means of saving money. For materials not in this category the acquisition librarian should exercise circumspection before placing orders with overseas suppliers.

When materials are ordered direct from overseas sources, care must be taken to ensure that the requirements of the Customs Department are met. Where possible the purchase should be arranged through the State Government Purchasing Authority which will be aware of customs regulations and requirements. If this is not possible use should be made of a customs agent who is specially trained to attend to all matters concerning imported goods. The overseas supplier should furnish the purchaser with a declared invoice and this

invoice together with the bill of lading in the case of goods sent by ship or the notice of advice of arrival in the case of goods sent by post should be forwarded to the customs agent for attention. The procedures connected with customs are complicated and time-consuming and most colleges would be unwise to attempt to carry out their own customs work.

Previously the lack of selection aids which provide the librarian with evaluative reviews was noted. There are however several general bibliographical aids which are very useful as guides to materials available. Of particular interest are the **NICEM Indexes** compiled by the National Information Center for Educational Media at the University of Southern California. These are available in four volumes published by Bowker of New York. The four indexes are —

NICEM Index to 16 mm Educational Films. (11)

NICEM Index to 8 mm Educational Motion Cartridges. (12)

NICEM Index to 35 mm Educational Filmstrips. (13)

NICEM Index to Overhead Transparencies. (14)

Each volume has a subject guide, an alphabetical listing by title with full bibliographical data, a physical description for each entry and a guide to instruction level, and a directory of producers and distributors. While these are the most comprehensive guides available, they are rather expensive (the **Index to 16 mm Educational Films** costs approximately $35.00) and a library may find it is able to operate satisfactorily while using less expensive publications.

The following works provide lists of publications which will be found very useful as guides to the media:

Rufsvold, M. I. & C. Guss, **Guides to newer educational media.** 2nd ed. Chicago, American Library Association, 1967. (approx. $2). This is a guide to catalogues, lists, professional organizations, and specialized periodicals which systematically provide information on the newer media including films, filmstrips, phonodiscs, phonotapes, programmed instruction materials, slides, transparencies, and videotapes. This work is highly recommended. There is a condensation of this work available in **Audio-Visual Instruction** v. 12: 11-15. Jan. 1967.

Hicks, W. B. and A. M. Tillen, **Developing multi-media libraries.** N. Y., Bowker, 1970. Chapters on 'Selection of multi-media resources' and 'Ways and means of acquisition' include lists of publications of value in selection and acquisition.

Gillespie, J. T. and E. Cohn, "Getting started with non-print media; guides to the bibliographies". **Top of the News.** v. 25: 402-5+ June 1969. This is a short but useful guide to bibliographies. It is of most value for libraries interested in the selection of films.

Wynar, B. S., **Library acquisitions; a classified bibliographic guide to the literature and reference tools.** Rochester, N.Y., Libraries Unlimited, 1968. A section entitled 'Audio-Visual materials', p. 224-234

provides a bibliography of articles and books concerned with the problems of acquisition and a bibliography of guides and directories useful in selection and acquisition.

Association of Colleges and Research Libraries. Audio-Visual Committee. **Guidelines for audio-visual services in academic libraries.** Chicago, 1968. In an extensive bibliography on audiovisual services, a section is devoted to selection tools, cataloguing manuals and evaluation of equipment.

The Division of Audio-Visual Instruction of the National Education Association, 1201 16th St. N.W., Washington, D.C. 20036 (15) will supply free of charge bibliographies of guides to the media and of books, pamphlets and articles concerned with various aspects of audiovisual materials and equipment.

Educational books and equipment, an Australian periodical now published nine times a year by Knight Howard and Associates, Sydney, and free to educational institutions, will be of value to librarians concerned with audiovisual materials and equipment. While it is primarily of interest to those engaged in primary and secondary education it is of use to college libraries for locating publishers and suppliers of audiovisual materials and equipment as many of them advertise regularly in it.

Audio Visual Marketplace published annually by R. R. Bowker, New York is an excellent source for information on producers and distributors in the United States of materials and equipment. It also offers a directory of audiovisual dealers, associations, cataloguing services and journals. This publication, priced at $13.50, would be a valuable asset in any college library.

Audio Visual Australia is a new serial to be published three times a year by Audio Visual Australia, 333 Flinders Lane, Melbourne 3000. Volume 1, Number 1, appeared recently. Articles on the audiovisual media are included as well as descriptions and evaluations of equipment and materials.

Educare catalogue of educational needs, published annually by Knight Howard and Associates Pty. Ltd., 20 Bridge Street, Sydney, provides information on manufacturers and suppliers of audiovisual materials, equipment and furnishings.

The guides, directories and indexes mentioned and those which will be found listed in the bibliographies indicated are no substitute for the librarian becoming thoroughly acquainted with the media, the publishers and the suppliers. It is advisable to contact publishers or their agents requesting inclusion on their mailing lists for catalogues, and preview notices. These should be retained and will prove valuable aids for selection purposes. Many of the larger suppliers have representatives who will call regularly. Some librarians consider these representatives a nuisance. I have found them valuable sources of information in an area where information on the latest materials available is rather scant. They are usually keen to arrange inspection of materials and equipment and while their aim obviously is to sell, the librarian is under no obligation to buy.

In selecting materials for acquisition, caution should be exercised in choosing materials in new and unusual formats. An interesting feature of audiovisual media is the number of types which have had relatively short life spans. Before investing in materials in a new medium it is wise to consider the availability of equipment to make use of the materials and the availability of a substantial range of materials in the particular medium.

The procedures used for ordering and receiving non-book materials should follow closely those used for book materials.

Hicks and Tillen [16] provide a detailed description of an acquisition system employing multiple-copy order forms. Such a system offers an effective and efficient means of controlling orders.

When acquiring audiovisual equipment, specifications should be drawn up stating the precise requirements of the library. A copy of the specifications is forwarded to each manufacturer of the type of equipment required or his agent and quotations for the supply of equipment meeting the specifications are invited. In the specification, it is recommended that the firm tendering for supply should be required to submit brochures illustrating and describing the equipment and to make the equipment available for inspection and demonstration at a convenient location. To ensure that valid comparisons can be made of the various brands of equipment available, a check list of specifications should be compiled and used as the basis for inspection. A copy of the check-list should be completed for each item inspected and a table of comparisons compiled when all items have been inspected.

On receipt of audiovisual materials, the library should immediately put into practice an established checking procedure to ensure that the items received are precisely those ordered and that they are in good condition. Check for damage, omissions, and poor quality. Films should be viewed, kits should be inspected to ensure all items are included, recordings should be played to ensure there are no defects. Checking procedures should not be delayed as is often the case with book materials. In the event of defects, damage or omissions, the supplier should be notified at once and requested to make good the defect.

Once items received have been checked and accepted it is essential that proper procedures for preparing them for inclusion in the collection be followed. Accession, cataloguing and classification procedures should follow closely those established for the treatment of books. Identification and physical processing of audiovisual materials, however, will often be of a more complicated nature.

First ensure that the item is housed in a sturdy, well-made container that will protect it from damage. This may require replacing the original container with a more suitable substitute. Containers for specific formats are discussed in detail in later sections.

Second, the item and the container must be clearly and permanently marked with the library's property stamp, and the appropriate title and call number of the item. In the case of items consisting of several parts, each part should be marked. Do not omit to mark every part with the call number as in the event of one part being separated from the remainder there will be considerable difficulty in determining which set the part belongs to if adequate identification marks are not available on it. Identification marks should be made on the container in such a way that they are easily seen during storage. Self-adhesive labels are suitable for identification purposes as the information can be typed on them and they are easy to apply. Care should be taken in selecting the labels to be used to ensure that they will adhere permanently. "Permaseal" labels available from Raeco Library Equipment Pty. Ltd., are effective and cannot be removed without destroying the label.

Third, a list detailing the separate pieces comprising a kit should be prepared and pasted on the container of each kit allowing easy checking to ensure all pieces are present.

Fourth, equipment should be marked with the college name either by painting over a prepared stencil or by attaching metal tags inscribed with the college name to the equipment with a bonding compound such as "Araldite". "Dymo" tape manufactured by Dymo Australia Pty. Ltd., may be used but experience has shown that this can be removed from items of equipment fairly easily.

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3. French, J. 'Evaluation gap; the state of the art in A/V reviewing, with special emphasis on film strips'. **Library Journal** v. 95: 1162-6, March 15, 1970. Comment **Library Journal** v. 95: 1877-8, May 15, 1970. (p. 1164).
4. Levett, J. **The concept of a resource materials centre and some notes on its implications for CAE librarians.** Unpublished paper presented at the Conference of Chief-Librarians of Colleges of Advanced Education, Canberra, March 15th-17th, 1971. (p. 8).
5. Erickson, C. W. H. **Administering audiovisual services.** New York, Macmillan, 1959.
6. Association of College and Research Libraries. Audio-Visual Committee. **Guidelines for Audio-Visual Services in Academic Libraries.** Chicago, 1968. (p. 14).

7. Trevaskis, G. A., **Preparing descriptive profiles for educational materials. A manual for evaluators.** Waigina, University of Papua and New Guinea, Educational Materials Centre, 1970.

8. Hodges, Elizabeth D. 'Selecting materials to support the curriculum'. **Childhood education** v. 43: 69-72, October 1966.

9. American Association of School Librarians. **Policies and procedures for selection of instructional materials.** Chicago, 1970.

10. **Instructional Materials Selection Policy.** Bethlehem, Pa. Northampton County Area Community College, 1969.

11. **NICEM Index to 16 mm Educational Films,** compiled by the National Information Center for Educational Media of the University of Southern California. 2nd ed. New York, R. R. Bowker, 1969.

12. **NICEM Index to 8 mm Educational Motion Cartridges,** compiled by the National Information Center for Educational Media of the University of Southern California. New York, R. R. Bowker, 1969.

13. **NICEM Index to 35 mm Educational Filmstrips,** compiled by the National Information Center for Educational Media of the University of Southern California. 2nd ed. New York, R. R. Bowker, 1970.

14. **NICEM Index to Overhead Transparencies** compiled by the National Information Center for Educational Media of the University of Southern California. New York, R. R. Bowker, 1969.

15. The Division of Audio-Visual Instruction of the National Education Association (DAVI) has recently changed its name to the Association for Educational Communications and Technology.

16. Hicks, W. B. and A. M. Tillin. **Developing multi-media libraries.** New York, Bowker, 1970. (p. 50-56).

IV

BIBLIOGRAPHIC ORGANIZATION

The possession of a large and varied collection of non-book materials is no guarantee that it will be effectively used. Its existence must be brought to the notice of college staff and students. In part, this can be achieved by active promotion of non-book materials through displays, staff seminars on their use, and circulation of a library newsletter which lists and describes new materials and equipment acquired. But this will not be sufficient. The materials must also be well catalogued and their catalogue entries must be included in the library's general catalogue. The development of an integrated catalogue which includes the catalogue cards for all the library's resources regardless of media serves to de-emphasize differences between book and non-book materials and ensures that the library user who comes to the catalogue seeking information on a particular subject is made aware of the total resources of the library in the particular subject regardless of the media in which the various items of information occur. Hicks and Tillin suggest that "this complete information on available resources enables the user to determine easily and quickly what materials might be most useful for the required problem solution. It provides a choice of materials and the possibility of substitution should the desired item be already in use. Such a catalogue may also suggest new ideas for varied approaches to a subject by employing different kinds of media". (1) In the library which maintains separate catalogues for each medium located in various areas of the library, the patron is forced to move from catalogue to catalogue and must have "the instincts of a Sherlock Holmes in order to determine the availability of materials which he needs or desires". (2)

In an educational institution an integrated catalogue has much to recommend it. However several problems will confront the librarian who wishes to create one. Catalogue entries for non-book materials must be compatible with those for books so that interfiling of entries can be achieved.

To ensure compatibility, headings used in the subject cataloguing of non-book materials must be obtained from the same source as those used in the cataloguing of books. Since a major purpose of an integrated catalogue is to bring together entries for similar information regardless of the medium in which it is presented, it is essential that the rules used for determining the main entries for non-book materials result in entries which are compatible with those used to determine main entries for books. It is difficult to see how this can be achieved by using a blanket rule such as Hicks and Tillin advocate — "use title main entry for all non-book materials". (3)

In the large file of cards that will develop in an integrated catalogue, the entries for non-book materials will tend to become lost and the user wishing to locate an item in a particular medium will be forced to spend considerable time searching a file which contains information on many items irrelevant to his needs. The busy lecturer who comes to the library seeking slides or films to use in a lecture

he is presenting on a particular subject does not want to be confronted with the task of searching a large number of catalogue entries under the particular subject heading until he finds the entry for the film or set of slides that perhaps he has already heard is held by the library. To cater for such a user, whose goodwill is vital to the library, we must offer a convenient arrangement in the catalogue so that with a minimum of effort he is able to locate the entry for the item for which he is searching. In the card catalogue this may be best achieved by employing a simple colour coding.

In developing an integrated catalogue we must provide solutions to two apparently different problems. On the one hand we wish to present to the users, particularly the students, a record of the total information resources of the library with the minimum differentiation between information presented in various media and on the other hand we wish to cater for those users, particularly lecturers, who come to the library to locate an information source in a particular medium and for whom no information source in an alternative medium is satisfactory. In the library which has already begun production of its catalogue by computer or in those intending to embark upon such a course the solution to this problem can be achieved with ease. (4) In addition to an integrated subject catalogue in which entries for the total resources of the library are included, a separate subject catalogue for each medium can be produced. It is understood that this will be the case in the library of the Royal Melbourne Institute of Technology. This will provide those users who require information in a particular medium, particularly for a class presentation, to establish with ease whether or not the library has what they require. In those libraries which have card catalogues, the problem can be solved either by having a separate catalogue for each medium or by employing a colour code within an integrated catalogue. Since separate catalogues are undesirable because the differences between media are highlighted, it may be decided that a colour code be used.

In those libraries where the non-book materials collection is housed separately from the book collection and at a distance from the library catalogue it may be thought desirable for reader convenience to have a catalogue of the non-book materials adjacent to the collection. For the library which has a computer produced book catalogue, this does not provide any great difficulty but for the library with a card catalogue, the duplication of the entries for non-book materials and the subsequent provision of a separate catalogue is a task not to be undertaken lightly. The cost is considerable in terms of both materials and staff time. I question the validity of the argument presented of user convenience. Taken to its obvious conclusions, it is possible to argue for the provision of separate catalogues adjacent to the reference and serial collections if these are housed separately from the monograph collection and for those sections of the collection stored at some distance from the catalogue, perhaps on another floor of the library building. Desirable as such separate catalogues may be, it is not feasible within the normal circumstances of a college library to entertain their production.

The provision of a separate catalogue for non-book materials in addition to an integrated catalogue, seems to be a carry-over from what was a necessary practice when non-book materials were usually housed in locations quite separate from the library. In those colleges where this continues to be the case, the argument for an additional catalogue located at the point of storage is indeed convincing, but in those colleges where the non-book materials are housed within the library, provision of an additional catalogue would seem to be a luxury few Australian colleges could afford.

Commercially produced cataloguing

A large proportion of Australian college libraries makes considerable use of commercially produced catalogue cards for books. Some library supply firms are able to offer a cards-with-books service, providing Library of Congress and National Library cards. Libraries are able to use the card service of the National Library of Australia. Libraries report that catalogue cards are available for a high percentage of recent imprints. Unfortunately this is not the case with non-book materials. Librarians are now accustomed to making use of commercially available book cataloguing with its attendant time-saving benefits and expect that catalogue cards will also be available for non-book materials.

In the United States, in addition to the Library of Congress, several companies have available for purchase prepared catalogue cards for audiovisual materials. A survey entitled 'Commercial media cataloging — what's around?' (5) published in the November, 1968 issue of **Library Journal** provides a comprehensive coverage of the firms operating in this field and the services they offer.

In Australia the services of such firms are not available. No firm supplying audiovisual materials to libraries also offers a card service. In fact no one firm exists which can offer to libraries the same type of comprehensive service for non-book materials as is offered for books by the larger library supply firms. Most firms dealing in audiovisual materials seem to be restricted largely to materials produced by companies for which they act as sole Australian agents. While this is the case no supplier will be in a position to offer a card service using Library of Congress cards.

Library of Congress cards are available for an increasing range of audiovisual materials particularly films, filmstrips, phonodiscs and phonotapes. Those libraries which have access to the National Union Catalogue will obtain considerable assistance in cataloguing materials largely of American origin. Those which do not have access to this publication but which are developing an audiovisual materials collection of some magnitude may find it advantageous to subscribe to two sections of the National Union Catalogue which are published separately:

(i) **Library of Congress Catalog. Music and Phonorecords.**
Washington, Library of Congress, $20 per annum — published semi-annually with annual and quinquennial cumulations.

(ii) **Library of Congress Catalog. Motion pictures and filmstrips.** A cumulative list of works represented by Library of Congress printed cards. Washington, Library of Congress, $25 per annum — published quarterly with annual and quinquennial cumulations.

Both publications reproduce the catalogue cards produced by the Library of Congress.

The National Library Card Service of the National Library of Australia can provide on request copies of Library of Congress printed cards available for non-book materials. Orders for cards should be made on the forms available on application to the National Library Card Service and should be directed to the service. Clients are required to register for the Overseas Card Service. Cards available are restricted to those in the file of Library of Congress cards deposited with the National Library. Charges for the catalogue card service for overseas publications are (as at January 1970):

Single copies of cards — 8 cents per copy.

Sets of cards — 40 cents per set.

Cards additional to sets are charged as single cards.

For Australian produced materials this type of cataloguing assistance is not available and college librarians will find it necessary to catalogue most of this material as well as material produced overseas for which Library of Congress cards are not available. This is, of course, inevitable for materials produced within the college.

Cataloguing

P. S. Grove and H. L. Totten in their article, "Bibliographic control of media: the librarian's excedrin headache" (6) provide an excellent account of the attempts made in the United States since 1955 to cope with the development of standardized procedures for the bibliographic organization of non-book materials. The lack of standardization of the essential elements in cataloguing audiovisual materials has been one of the major factors contributing to the confusion experienced by librarians confronted with the task of cataloguing audiovisual materials. In 1957 a Special Committee on the Bibliographic Control of Audio-Visual Materials established by the Division of Cataloguing and Classification of the American Library Association reported (7) the results of a survey it conducted on cataloguing procedures for audiovisual materials followed in a large number of American libraries. Among its recommendations the Committee included the recommendation "that a standardized manual of procedure for the handling of audiovisual materials be prepared. The manual should include (a) a simplified but easily expandable system for small collections, (b) directions for cataloging with adequate examples and sample cards, and (c) suggestions for marking and for the physical handling of these materials". Some fourteen years later such a standardized manual for cataloguing is still lacking.

Certainly there are numerous manuals available but in the main these have been developed to meet the specific requirements of particular libraries and library systems. Some eight of these publications have been inspected closely as well as many serial articles devoted wholly or in part to cataloguing of non-book materials. Many were oriented towards school libraries and while often they were excellent publications it was felt that for the most part they did not fulfil the needs of Australian college library cataloguers. This was particularly so with those published prior to the **Anglo-American Cataloging Rules** (8) of 1967. However, as librarians may find it useful to read some of these publications the following select list is provided.

1. Westhuis, J. L. and J. M. DeYoung, **Cataloging manual for non-book materials in learning centers and school libraries.** Revised edition. Ann Arbor, Mich., Michigan Association of School Librarians, 1967.
2. National Education Association. Department of Audiovisual Instruction. **Standards for cataloging, coding and scheduling educational media.** Washington, D.C., National Education Association, 1968.
3. Hicks, W. B. and A. M. Tillin. **The organization of non-book materials in school libraries.** Sacramento, California State Department of Education, 1967.

A bibliography entitled "Aids for use in cataloging and classifying audiovisual materials" (9) provides an extensive listing of cataloguing aids and although published in 1957 is still useful.

The Anglo-American Cataloging Rules, (AACR) now used widely throughout Australian college libraries, provides a complete section, Part 3, on non-book materials. Rules are included for manuscripts, maps, atlases, motion pictures and filmstrips, music, phonorecords, pictures, designs and other two-dimensional representations. A brief discussion of the rules for cataloguing non-book materials is available in proceedings of a workshop on the AACR held in 1967. (10)

If a library is using AACR for cataloguing its books, and if it intends developing an integrated catalogue for all its resources, it is obvious that the rules used in the cataloguing of non-book materials must either be taken from AACR or be compatible with those in it.

Part 3 of AACR has been subjected to considerable criticism. Riddle, Lewis and Macdonald suggest that "the **Anglo-American Cataloging Rules** effectively organizes material within a single medium, but is unworkable within an integrated collection". (11) Jay E. Daily offers criticism of AACR rules for cataloguing motion pictures, phonorecordings, and pictures and concludes "the new rules of cataloging gives no more help than did the old and should not be followed". (12) Certainly for the busy college librarian the AACR presents difficulties in use if for no other reason than that in parts it is difficult to follow and does not provide simple guides to many of the cataloguing problems the college librarian meets. What, for instance, should be done

with untitled 35 mm slides produced at the request of a lecturer by the college audiovisual department and included in the library's collection?

Fortunately for college librarians concerned with the cataloguing of non-book materials, a manual for the cataloguing of non-book materials is now available which provides guidelines for the bibliographic organization of an almost complete range of non-book materials and although it has not yet been accepted as the standardized manual for cataloguing non-book materials, it appears that it will be the basis of any such publication. **Non-book materials: the organization of integrated collections** (13) by Jean Riddle, Shirley Lewis and Janet Macdonald presents directions for cataloguing in a clear, unambiguous and simple style. Copious examples in the form of sample catalogue cards are provided and will prove to be of value.

The principles upon which the cataloguing is based are designed to be compatible with the rules in Parts I and II of AACR but the rules in Part III have been followed only in so far as they do not impair the functioning of an integrated catalogue.

The use of **Non-book materials** as a handbook for cataloguing audiovisual materials is recommended for college libraries. This recommendation is given in the light of the endorsement given to the publication by the Cataloging and Classification Section Executive Board of the American Library Association's Resources and Technical Services Division as an interim guide for the cataloguing of non-book materials. This endorsement indicates a strong possibility that in the proposed revised edition of AACR the rules included for cataloguing non-book materials will be very much along the lines of those recommended in **Non-book materials.** (14)

The directions given in **Non-book materials** are clear and easy to follow. With the exception of video-tapes (15) all audiovisual materials currently available are included. It may be felt necessary to vary slightly from some of the recommendations given for cataloguing some types of materials and some of these possible variations are dealt with in later sections devoted to specific media.

The requirement in cataloguing non-book materials is not one of creating special rules for the purpose but of adapting the standard principles of cataloguing to the specific materials. While, on occasions, it is difficult when cataloguing books to obtain sufficient precise information to identify and describe them adequately, this problem is a frequent occurrence in the cataloguing of non-book materials. Major problems arise in the cataloguing of non-book materials when inadequate data is provided on the packaging or on a readily accessible part of an item. The librarian will often be forced to view or audition an item in order to establish some necessary details. This is a time-consuming task. Materials produced within the college will usually lack sufficient information on their packages or on other easily accessible parts. To overcome this problem it is recommended that an arrangement be made with the audiovisual production department that

when an item is produced a standard form with all details normally required for cataloguing is completed. This form should accompany the item when it is deposited in the library for cataloguing.

In drawing up such a form each librarian will have in mind the needs of his particular library, however, it is recommended that the following headings be included for completion where applicable.

(a) Type of medium — The audiovisual production department should be provided with a list of media types and definitions.

(b) Author (if any) — This is of particular importance in the case of taped lectures prepared and presented by lecturing staff or visiting lecturers.

(c) Title given or recommended — In many cases no title will be given but if one is recommended the cataloguer will be saved the inconvenience of having to invent one and the title, one hopes, meets the needs of the person who initiated production of the item.

(d) Source — This is important when the item consists of reproductions from existing materials, for example 35 mm slides made from illustrations in books.

(e) Subject matter — A brief but precise statement is required. This will be of considerable assistance to the cataloguer when determining subject headings and summaries.

(f) Length

(g) Number of items

(h) Size

(i) Form of sound accompaniment

(j) Playback speed

(k) Colour

The information provided on such a form will save much time-consuming work.

In cataloguing non-book materials the cataloguer must determine several essential items of information.

Main Entry. The main entry is the first item of information which must be determined when cataloguing any materials. In their general rules for descriptive cataloging, Riddle, Lewis and Macdonald follow closely the rules for determining main entry prescribed in AACR. "Enter under author. Where the author cannot be identified or where the extent and nature of the collaborative authorship of audio-visual works makes

author entry inappropriate, enter under title". (16) In AACR an author is defined as "The person or corporate body chiefly responsible for the creation of the intellectual or artistic content of a work, e.g. the writer of a book, the compiler of a bibliography, the composer of a music work, the artist who paints a picture, the photographer who takes a photograph". (17)

The rule suggested for main entry in **Non-book materials** is a sound one for it ensures that a work by a particular author which is held by the library will be entered in the catalogue under the same main entry regardless of the format in which it occurs.

It results also in a consistent approach in cataloguing which is essential if the user is to consult the catalogue with ease.

Title. When determining the title of a non-book item, cataloguers will often find variations between the title given on the item itself and that given on the container. In **Non-book materials** it is suggested that the order of precedence for determining the title should be 1. the material itself, 2. the container and 3. other sources. In the event of no title being available the cataloguer is to supply one and enclose it in square brackets. Because a particular work will sometimes appear under various titles the practice has developed of providing uniform titles to bring together in the catalogue all the entries for given works. In AACR recognition is given to the importance of uniform titles. Among non-book materials, variations in title are quite common particularly in phonorecordings of music. **Non-book materials** recommends the use of uniform titles for phonodiscs and phonotapes as "helpful in bringing together various versions and arrangements of musical compositions". (18) A uniform title should also be used when variations in title occur among different recordings of the same work of literature. Records of decisions made on uniform titles to be used should be included in the authority file maintained in the cataloguing department.

Identifying the medium. A statement of the medium in which a particular item of audiovisual material occurs is normally given immediately following the title. This serves to distinguish between items in book format from those in non-book format, to identify the specific physical medium, to bring to the notice of the user the need to employ particular equipment where necessary in order to view or listen to the item, and to provide a means by which retrieval by medium is possible in the event of a library's catalogue being computerized, that is, a print out will be available of all catalogued items in each medium. This method of identifying the medium suggested in **Non-book materials** is that found also in AACR. In the event of a decision being made to include a media code in call numbers it may be felt that a statement of the medium following the title is unnecessary duplication. It is believed that this is not so as the medium statement identifies immediately for the user the format of a given item. Codes used in call numbers are always confusing to catalogue users. Even explanatory notices in prominent positions near the catalogue and the inclusion of cards in the catalogue explaining the code do

little to dispel the confusion. The small inconvenience caused to library staff in providing both a medium code and a medium statement will be repaid many times over by the greater ease with which the library's patrons will be able to understand the catalogue entry. Closely associated with designation is the development of a standardized terminology for describing audiovisual media. Riddle, Lewis and Macdonald make the point that "one of the major road blocks to the standardization of non-book cataloguing is the plethora of names for audiovisual materials. Standardization of terminology must be the basis of a cataloging code". (19) The media designations in **Non-book materials** (20) are recommended for adoption by college libraries as standard terminology. Some objections may be raised on the "non-Australian" nature of some of the designations used, for example, phonodisc and phonotape. However, there is no standard "Australian" name for either of these media. The terms suggested are clear and will soon be understood by library users. If libraries choose to adopt designations peculiar to their own situation, difficulties will arise in the future if attempts are made to develop union catalogues of audiovisual materials held by the colleges. Interest has been shown by college librarians in the possibility of estabishing a union catalogue and a key factor in doing so will be the acceptance by participating libraries of a standardized terminology.

Imprint. Although Riddle, Lewis and Macdonald recommend that "place is not given unless this information will distinguish between two producers with similar names", (21) it is recommended that where possible place be given. A knowledge of the place of production is often useful in anticipating the bias that may occur in an item. This is often of considerable value to a lecturer choosing materials for class use. The name of the producer or manufacturer is given and the date of production if this can be ascertained.

Collation. The collation provides a physical description of an item. For the library user it can often be the source of information which will help him to decide which item or items he will select from a number available for viewing or auditioning. To the lecturer with a limited lecture period in which to present a film, the length of a film can be a deciding factor in his choice of one to present in class. The nature of the collation statement will be determined in part by the type of medium of the item being catalogued. **Standards for cataloguing, coding and scheduling educational media** (22) provides a checklist of items for the physical description of non-book materials and includes, where applicable, length, number of items, size, form of verbal accompaniment and mode of sound recording, playback speed, and colour. Used in conjunction with **Non-book materials** it provides a useful guide for cataloguers.

Notes. Notes are used to bring to the notice of the catalogue user any special or unusual features of the material. For example, reference may be made to guides or notes accompanying the material or to special equipment required for its use. If the material contains more than one item, a contents note is normally used. The problem

will arise of when to provide a contents listing particularly in the case of materials such as recordings and kits which may contain a large number of individual items. This decision is one for the cataloguer to make.

Summaries. Summaries are of special importance for materials which will not be available on open access and for materials which although on open access are not quickly and easily viewed or auditioned, for example, motion picture films. Summaries should be brief and explicit and should not reiterate information provided in the contents note.

Subject headings. The recommended source of subject headings for cataloguing audiovisual materials in a college library is **Subject headings used in the dictionary catalogs of the Library of Congress** (23) as it provides a more extensive range of subject headings than **Sears list of subject headings** (24) and is the usual source of subject headings for cataloguing books in a college library. It is essential for compatibility that the subject headings for audiovisual materials be drawn from the same source as those for books. The scheme of headings used must be specific, comprehensive, consistent and authoritative. Some libraries may find it useful to adopt the subdivision "—Audiovisual materials" as a means of bringing together all entries for audiovisual materials available on a subject in the library. This has the effect of simplifying the search for a user who requires audiovisual materials only as sources of information on a subject.

Call number. The nature of the call number which will be included on the catalogue card and be marked on the item being catalogued will be determined principally by answering two important questions—

(i) Will a symbol or word be used to identify the location of an item?

(ii) Will the materials be stored in classified order or by accession number?

Identification of media locations by symbols or words is essential when the non-book collection is not stored with the books as an integrated collection. Items which are arranged by classified order with other media do not require any location symbol or word included in the call number. If an item cannot be intershelved in its correct place in the classified sequence then its location should be noted as part of the call number on the catalogue card.

The use of location symbols presupposes that the user already knows the meaning of each symbol employed or at least has ready access to an explanation of them. A problem every library that attempts to develop a series of location symbols for the various sections of its collection will face is that of running out of symbols which are simple and have some mnemonic value. Symbols designating the locations of the various media must not conflict with those designating the location of outsize books, the reference collection and other sections of the collection. The total number of location symbols required will be considerable and user confusion is inevitable. The media code included in **Standards for cataloguing, coding and scheduling educational media** (25) has been reported by Riddle, Lewis and Macdonald (26) as unworkable in field tests carried out on its use. Each

library which wishes to use a media location code as part of its call number arrangement will have to develop its own code. In doing so it is recommended that the following be kept in mind:

- — The number of symbols used should be kept to the barest possible minimum.
- — Symbols used should be mnemonics derived from the media designation included on the catalogue card after the title of the item.
- — There must be no conflict between symbols used for media location and those used as location codes for other purposes.
- — A record of the location symbols decided upon should be kept and the symbols employed consistently.

Because of the problems inherent in developing and implementing a system of media location symbols, it is recommended that instead of a symbol, the complete media designation be given above the classification or accession number. This may cause some spacing problems in the relatively small area of card available for the call number but it does minimize the confusion experienced by the catalogue user. It is important to use the standard media designations adopted for use in cataloguing. If this method is employed it may be considered unnecessary to include media designations following the titles of items on the catalogue cards.

Classified or accession order

The results of a survey carried out in 1956 by a Special Committee on the Bibliographic Control of Audio-Visual Materials established by the Division of Cataloging and Classification of the American Library Association revealed that at that time, as at present, there was a clear division of opinion on the issue of classifying audiovisual materials or arranging them by some other system. The Committee found that of those libraries which collected recordings, sixty-four classified them while seventy-seven used some other system. "Some of these systems were specified as manufacturer's number, accession number, serial number, letter code, groupings by size and speed subarranged alphabetically, alphabetical arrangement by composer or title, alphabetical listing by size, location symbols for type of composition, Cutter number from composer subarranged in order of receipt, and various combinations of letter and number systems". (27) This remarkable list of systems speaks volumes for the inventiveness of librarians and also for their potential ability to add to the confusion experienced by many library users even in those libraries employing the simplest possible systems for organizing materials.

The library of a college of advanced education is catering largely for an undergraduate student body. Many of its users will be relatively unsophisticated in library use and to minimize the confusion these users will experience and to ensure that materials will be readily located and thereby used, it is necessary to organize all the resources of the library, irrespective of media, in a manner as consistent as possible.

In organizing non-book materials, the use of the same classification scheme used in the organization of the library's books is recommended. One system is thus in use throughout the library and the user soon becomes familiar with it. Classification of non-book materials permits their integration with the books or, if required, the development of an integrated audiovisual collection. Classified arrangement allows a total view of holdings in particular subject areas and permits browsing even in the rather limited manner possible with non-book materials.

Riddle, Lewis and Macdonald suggest that organization by accession number has the following disadvantages:

"1. Materials on the same subject are not housed together because there is no relationship between the call number and the subject matter.

2. Added copies of a particular item will have different call numbers, and will be stored in different places.

3. The only subject approach to materials is through the catalogue.

4. Call numbers must be assigned by individual libraries, thereby diminishing the economy of centralized cataloguing services". (28)

Holdridge comments that "some librarians prefer the accession numbering system because it does not require constant rearranging of material when new items are added to the collection". (29) But he concludes that the convenience of the classified arrangement for the user outweighs the added work or inconvenience to the librarian.

Other elements of the call number beside location symbol and classification number will be determined by individual libraries to suit their own needs and will be conditioned largely by the manner in which book numbers are determined. If an integrated collection is envisaged, the method used for determining book numbers must also be used for non-book materials whether it be Cutter numbers, letters derived from the main entry, or some other system for if this is not done there will be difficulty in inter-filing the books and the non-book materials. Whatever method is employed it is essential that every item be provided with a unique number to eliminate confusion in the shelf list and in the loan records. This is particularly important in the event of the mechanization of loan records.

Color-coding

Earlier in this chapter it was noted that it may be considered desirable to provide where feasible a simple colour code in the card catalogue in order to assist those users who come to the catalogue seeking entries for material in a particular medium. Hicks and Tillin (30) note that the current trend is to dispense with colour coding and this is completely understandable when an attempt is made to provide a separate colour for each medium. The major purpose for employing a colour code is to cater for lecturers who wish to use

audiovisual materials as teaching aids. Audiovisual materials used as teaching aids fall into three major categories, those used predominantly for their visual impact, those used which are primarily recorded sound and those which are combinations of two or more media and which are usually referred to as kits. It is suggested that if a colour code is used, only three colours be employed, one for predominantly visual materials, one for materials which are recorded sound and one for kits.

The reasons put forward in **Non-book materials** (31) against colour coding have merit and deserve serious consideration by those libraries involved in making a decision on colour coding. Uniformity in colour does serve to reinforce the multi-media approach to materials. New methods of catalogue reproduction such as book catalogues make colour coding impractical and centralized cataloguing will not be done on coloured cards because there is no standard colour code. As valid as these reasons may be, some college libraries will still find it desirable to use a system of colour coding to meet their particular needs. For those libraries a simple system such as the one indicated above is recommended.

User advice

It is recommended that notices be placed in prominent positions adjacent to the catalogue giving precise explanations of any symbols or codes used in the catalogue and directions for finding the locations of any collections of media stored separately from the library's main collection. This may take the form of a floor plan of the library with the particular locations prominently marked.

Explanatory cards should also be included in the catalogue.

Recommendations

1. Catalogue entries for all the library's resources should be included in one integrated catalogue.
2. Where possible use catalogue copy from outside sources.
3. **Non-book materials: the organization of integrated collections** by J. Riddle, S. Lewis and J. Macdonald should be used as the source of standard procedures for cataloguing non-book materials.
4. A form should be drawn up which may be completed by the college audiovisual production department when materials produced by the department are forwarded to the library for inclusion in the collection. The form should detail all data required for cataloguing the material.
5. The use of media location symbols should be avoided because of confusion they may cause to catalogue users.
6. Materials should normally be arranged in classified order and not by accession number. The classification system used should be that used for the library's books.
7. A simple colour code for catalogue cards may be used to aid lecturers and others seeking information sources in particular formats for class presentations.

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V

STORAGE

The college librarian engaged in determining the storage arrangements to be implemented for a collection of non-book materials has a number of factors to keep in mind when attempting to reach a decision. He requires the material to be stored in such a manner that student and teacher use will in no way be inhibited but rather will be encouraged. This, after all, is his first concern. However the arrangements must also be such that possible damage to the materials from environmental conditions and unnecessary and careless handling is minimized.

For some librarians, consideration of the nature of non-book materials and the use patterns they anticipate for them leads to the conclusion that non-book materials, in the main, should be stored in closed access. Reasons offered for such a course of action include the cost of the materials, the need to employ equipment to make use of the materials, the teacher-oriented approach to non-book materials, and their susceptibility to damage.

Originally audiovisual materials were obtained for teacher use and, as such, limited access only was required. Today, student use in individual study situations is as important as teacher use in class situations. This change in use pattern has forced upon librarians a reconsideration of their shelving practices for audio-visual materials.

The claim that audiovisual materials are expensive and ought be kept on closed access to lessen unnecessary handling, damage, or theft bears further investigation. Some materials certainly are expensive, but many are no more so than many books which are happily placed on open access. Some materials are more susceptible to damage than others. We must simply accept this as it stands and attempt to overcome the problem by a more judicious means than putting everything on closed access. Phonodiscs are particularly prone to damage. It may be necessary in the case of these to hold in closed access a master copy available only for use in special circumstances and to make available for use on open access copies of the masters. Where copy-right regulations permit the practice, the ideal solution to the problem of damage to audio-recordings is the provision of additional copies for loan purposes made from the master tapes or records. The loan copies can be made in a standardized format which, in the case of audio-recordings, may be tape-cassettes.

On the surface, there seems to be good cause for believing that since special equipment is usually required to make use of most audiovisual materials browsing is not possible and thus there is no real advantage gained from offering the materials for immediate reader retrieval through open access. Quinly (1) supports this view. However, this is not entirely correct. Most items will come in some type of packaging. Normally this will be marked with information relating to the material inside. A tape-cassette case would normally indicate the contents of the tape. The storage boxes used for loop films lend themselves readily to having details of the film marked on the outside. Thus the information provided on the storage container

does offer a limited browsing facility. Some materials such as video-tapes which should be housed under optimum conditions and which require the use of very sophisticated equipment for viewing may be best housed in closed access. This will not be the case, however, when cassetted video-tapes are available. Materials in cassette form pose few problems if made available on open access. Possible damage to materials is minimized, there is adequate area on the cassette case itself or its storage box for the inclusion of details of the contents, and it is simple for a reader to inspect the contents if the necessary equipment is readily available.

The decision whether to place non-book materials on open or closed access should be made keeping in mind always that the prime purpose of providing the materials is to contribute to the education of the students in a meaningful manner. Librarians must be concerned with the educational issues first and foremost and with issues involving conservation and ease of handling only secondly. This is not to suggest that there should be no concern with minimizing damage or theft. The point being made is that there are more suitable ways by which the librarian can overcome these problems than by placing non-book materials on closed access.

Arguments put forward that the catalogue, in particular the subject catalogue, provides sufficient access to the materials appeal in theory; in practice most librarians know that student users still rely heavily on browsing in the shelves for locating materials suitable for their needs. Open access will undoubtedly cater best for student needs. Muller supports this view. "Open display and immediate access not only promote the use of media, but make the students' task of finding materials easier and more productive, broaden his learning experiences, and provide media that supplement and reinforce each other". (2)

From discussions with Australian college librarians, observations of current practices, and a survey of the literature, four important lines of opinion on the storage of non-book materials have been identified.

(i) Non-book materials held in closed access.

(ii) Non-book materials integrated and on open access but separate from the book collection.

(iii) Non-book materials not kept as an integrated collection but still available on open access.

(iv) Non-book materials integrated with the book collection on open access.

(i) **Closed access.** With this arrangement all materials are kept in closed access, shelved according to media and by accession number within each collection of a particular medium. The sole approach available is through the catalogue. This type of arrangement has little to commend it save that the security of the materials is ensured. It offers little encouragement to students,

or teachers for that matter, to utilize the collection. In a college in which the library aims to make a vital contribution to the educational enterprise by providing a collection of non-book materials, storage arrangements involving closed access should be avoided at all costs.

(ii) **Open access, integrated but separate from books.** With this method of storage audiovisual materials are available on open access, but as a separate collection. These are classified and arranged on the shelves in an integrated collection of audiovisual materials. This arrangement has much to commend it in a large library. The area can be kept under close supervision, equipment necessary to make use of the materials can be retained close at hand, users unfamiliar with the equipment and the media can be instructed in its use, and security is ensured by supervision of a single access/exit point for the area. The non-book materials collection at Macquarie University in Sydney has been arranged in this manner.

This arrangement, combining as it does both the opportunity for immediate user selection, inspection and use of materials and a high level of security is recommended for use in college libraries and particularly in large libraries.

To implement such a scheme, an area large enough to accommodate current and future needs should be set apart in the library. It is wise to surround the area with screening which preferably should be of glass to prevent any impression developing that the area is in any way out of bounds to students. Screening will help to prevent some of the noise which will be generated by the equipment in use annoying readers in adjacent areas of the library. A single entry/exit point should be provided for the area. This may be combined with the charging desk and enquiry desk. Shelving sufficient to meet the needs of the collection is required. Standard adjustable steel library shelving will best serve the purpose as it is flexible, readily available and much less expensive than custom made storage. There are very few items that cannot be stored on standard adjustable library shelving. Also, as Moriarty notes, "the sizes of equipment, reels of film, discs, and tapes change so rapidly with technological improvement that precisely designed cupboards and slots can very soon become obsolete". (3) For items which do not lend themselves readily to this type of accommodation, a range of storage units is available from manufacturers. **The audio-visual equipment directory** (4) provides a section on A-V storage cabinets. Australian manufacturers of library shelving have begun manufacturing audiovisual storage units. A range is available from Duff Steel Industries Pty. Ltd. Other sources are noted in the chapter, 'Manufacturers, Distributors and Sources of Information'. As storage arrangements for specific formats are discussed in the relevant sections, it will suffice to say here that storage arrangements must be made for all formats to allow as integrated a collection as possible.

Equipment required to make use of all the types of materials in the collection must be available for immediate use. All items of equipment should be clearly marked with instructions for use. An attendant should be present during all periods the area is available for use to instruct users in the operation of equipment and to carry out minor repairs. There is a distinct advantage gained for maintaining audiovisual equipment by housing it all in one area rather than in random locations throughout the building. Items of equipment required for use in the library beyond the non-book materials area are lent under the same conditions as those made available on loan for extra-mural use.

(iii) **Open access, not integrated.** When stored in this manner non-book materials are made available on open access but they are shelved separately by media. This results in the filmloops, the phonotapes, the sets of slides, etc. being housed as separate collections. A disadvantage accruing from this method is the proliferation of separate collections, an undesirable development particularly in a college library catering often for students who find difficulty in locating individual collections and in understanding the symbols used to indicate particular collections. It would seem to be sound practice in college libraries to limit the number of distinct collections to a barest minimum. It has been the frequent experience of this writer to find college students who are confused by the simplest collection division even though they are provided with quite extensive instruction and practical work in library use.

If audiovisual materials are housed as separate collections according to medium, they may be arranged within each collection by a classified or non-classified method. To avoid further user confusion, all materials should be arranged in classified order using the same classification scheme as is employed for the book materials. The use of an accession number with materials filed in numerical order appears to offer a simple solution. However it is in fact another hurdle for the library user to surmount. It is a potential source of confusion because it is to some extent different from the classification scheme the user has become used to and by which he expects to find material shelved. Accession order also precludes meaningful browsing, for materials of quite unrelated content may be juxtaposed. An important reason for providing open access, that of reader access to the materials for meaningful browsing, is thus negated. It would seem to be very unwise to introduce a classification scheme different from that in general use in the library specifically for the arrangement of a collection of materials in a specific format or to use a system of arrangement such as record manufacturer's number with which users were not familiar.

(iv) **Integration with books.** When this arrangement is employed the non-book materials are available on open access, classified and interfiled in the shelves with the book collection. This integrated approach brings together all information on a subject regardless

of the medium in which it occurs. Non-book materials are treated simply as sources of information and are accordingly shelved with other sources of information such as books. The difference between book and non-book materials is played-down, a difference which if highlighted may inhibit use of non-book materials by some users.

At all times the needs of the user should be of paramount importance in determining the storage arrangements of materials. The user needs direct access to materials for selection purposes, he requires all information held by the library on a subject to be stored together irrespective of the format in which it occurs if this is at all possible, he requires the materials to be arranged so that information on related subjects is housed in close proximity, and he requires the materials to be arranged in as simple a manner as is possible. Because integrated storage of materials caters as closely as possible for these reader needs, it has much to recommend it.

Robert Muller asserts that "physical separation of learning materials is an antique idea, and is not compatible with the concept of the media library. Integration is the key-note, and it is essential in the promotion of cross-media learning". (5) This view is supported by Veihman. (6)

Doris Dunnington of the Instructional Resource Centre, College of Du Page, Illinois reports on an experiment conducted at the College in intershelving non-book materials with the books. She reports: "We began at the College of Du Page with the concept of the integrated catalog, but in our second year of operation realized that this was not enough. If the student didn't SEE the material on the shelf, he didn't ask for it. Students tended to regard audiovisual materials as instructional devices to be used by the faculty in classroom presentations. There seemed only one way to change this concept, and we decided to experiment with it. Beginning on a small scale, we intershelved the science filmloops with the science books, set up equipment on nearby tables and stood back to see what would happen. Students were intrigued with the idea that they could view the filmloops on their own in the library, and our staff was kept busy demonstrating the use of the equipment until enough students had used it that they could begin helping one another. The response was so enthusiastic that we began intershelving filmloops into the history and social science sections". (7) The type of success reported by Dunnington was also experienced at the Darling Downs Institute of Advanced Education where all non-book materials possible were intershelved with the books. Use of filmloops and tape recordings rose dramatically and no problems have been experienced in the shelving of materials or their use by students. It was found that very little instruction had to be given to students in the operation of equipment as once several had been taught, they soon began teaching other students.

Interfiling non-book materials with books will create some problems. There is a need to select suitable storage boxes to protect materials some of which are relatively fragile. Provided suitable boxes are used there will be few difficulties encountered in sheving non-book materials with books. Film and tape in cassette formats can be shelved with books without any serious problems. Phonodiscs do present serious difficulties on account of their size and fragility. However, if it is possible to transfer recordings to tape cassettes and to retain the discs as master copies, the difficulties are overcome. If this is not possible, alternative arrangements must be made, perhaps along the lines of suggestions given in the section on sound recordings. 35 mm transparencies may provide problems when there are items which do not belong to specific sets of slides. Sets may be stored in commercially produced cartridges or folders and these can be interfiled with the books but this is not possible with individual slides or a small number of slides on the same subject for it would be an uneconomic proposition to store a single slide or a very few slides in a separate cartridge or folder. In these cases it may be necessary to revert to using separate storage facilities.

Some microforms, particularly microfiche and micro-opaque cards, do not lend themselves readily to interfiling with books because their size enhances the possibility of their being lost. With such materials separate storage, however undesirable, provides the only reasonable solution.

Although it is not feasible to interfile some non-book materials on the shelves with the books, this should not deter librarians from developing a collection as completely integrated as is possible. If total integration is not favoured, partial integration may be achieved by locating the non-book materials for each major subject area before or after the books on the subject. For example, the non-book materials concerned with chemistry may be located prior to or immediately after all the books on this broad subject.

It would seem that an integrated approach can be best implemented in small and medium sized libraries. In the larger library provision of sufficient equipment necessary to make use of non-book materials will be difficult since it will be necessary to provide items of equipment throughout the library. In the case of the large library, development of an area specifically for non-book materials and their use is desirable for economy, efficiency and security.

In summary it is recommended that non-book materials be stored in open access, be arranged in classified order and be as integrated a collection as possible. In the small and medium sized college library all non-book materials possible should be shelved with the books as an integrated collection. In the larger libraries non-book materials may be better stored as an integrated collection separate from the book collection.

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VI

CIRCULATION

In the chapter on storage facilities, open access storage was recommended because it offered students and staff the most immediate possible access to materials. To ensure that users will be able to make maximum use of the collection, materials and equipment must also be available on loan for extra-mural use. It goes without saying that loans to academic staff must be made so that materials may be used in class presentations. Non-book materials must also be made available on loan to students to provide them with the opportunity of using them in home study.

In implementing a circulation programme for lending non-book materials to students several issues must be clarified before a policy can be established.

1. What materials will be available for borrowing and which will not?

Ideally, all materials should be available on loan but this is not always possible. The purchase cost of an item should not be the sole guide for deciding whether or not it can be borrowed. Particularly fragile items (and there are very few of these), items of an unwieldly size or shape and those that require sophisticated reproduction equipment such as video-tapes may be excluded from loan, but there should be no rigid application of such rules. If it is decided that a large globe is not normally available on loan because of its size and susceptibility to damage, there is no real reason why it cannot be lent to a user who can provide a satisfactory means of transport for it from the library to the place of use.

2. What equipment will be available for loan?

Obviously, a student who wishes to make use of an item requiring particular equipment for viewing or listening to and who does not have access to suitable equipment will be at a disadvantage to his colleague who has ready access to the necessary equipment. To offer every student the opportunity of making maximum use of the materials in the collection, it is necessary to make equipment available for loan. Equipment borrowed will be subjected to more handling and rougher use than that retained permanently in the library and this must be taken into account in the selection of equipment. Although some equipment may not be available normally for extra-mural use because of its size, weight or fragility, there should not be rigid application of such rules.

3. What precautions will be taken to ensure minimum damage to materials and equipment on loan?

Even with the best intention on the part of the borrower, items will be damaged while being carried from the library to their point of use if suitable packaging is not available. Maps and prints are particularly susceptible to damage because of their unwieldly size. Provision of cardboard cylinders for use by students borrowing such

items will overcome most of the problems of damage. Sturdy cardboard boxes should be provided for carrying equipment which is not provided with a carrying case and for fragile materials.

4. Will the borrower be held responsible for materials or equipment returned from loan in a damaged condition?

This is an issue which must be decided before any loans are made. If it is decided that a borrower will be held responsible for any damage to equipment or materials taken out on loan, this should be made perfectly clear by displaying a notice to this effect in a prominent position and by including a statement of the borrower's responsibility on the loan transaction card.

5. What checks will be made of materials and equipment returned to ensure they are in good order and condition?

Whether a borrower is held responsible for damage or not, it is necessary that all equipment and materials returned be quickly checked so that they are not returned to the shelves or allowed out on loan in an obviously imperfect condition. Inspection of materials and equipment no matter how brief requires considerable staff time. It is, however, a necessary task and procedures to ensure that it is carried out should be established and observed. Detailed inspections are not feasible and it will be necessary to rely on users' reports and maintenance inspections to bring damage to notice.

Since equipment is often damaged because the user does not have a thorough understanding of its use, it is essential that an instruction guide be provided with all items of equipment allowed out on loan. Preferably the instructions should be printed or typed on a label which is attached to the equipment or to its carrying case. The instructions on use should be brought to the notice of the borrower by the circulation staff.

6. What should be the length of the loan period of audiovisual materials and equipment?

While the collection is small, short term loans only should be allowed to ensure that the maximum number of users have the opportunity of making use of the materials. As the collection grows, the loan period may be extended. As with printed materials, it may be found necessary to place restrictions on loans of audiovisual materials by limiting them to reference or reserve use only.

7. What records should be kept of loans?

The nature of these records will obviously vary from library to library. However, in those libraries employing a circulation system which involves the use of a loan card kept in a pocket within each book, problems may be found in modifying this system for use with

audiovisual materials. Some materials such as slides and loop films do not lend themselves readily to provision of a pocket for a loan card. Because of the problems associated with this, it is suggested that for the borrowing of audiovisual materials and equipment, the user complete a card for each loan on which he will record necessary details including a description of the item, its shelf number and his own name. All items of material and equipment should be marked with a unique call number and a clearly identifiable title. Loan cards can be filed as circulation records and on the return of the items can be discarded. If required, cards can be retained for statistical analyses. This can be very useful for ascertaining materials receiving the heaviest use.

There should be no hesitation on the part of the library in allowing circulation of non-book materials among students. Non-book materials are often costly to purchase and for a college to receive a reasonable return for its investment in them, every effort should be made to ensure they receive maximum use. This will be achieved only if they are available for use outside the library as well as within it.

VII

EQUIPMENT

The media contained in the audiovisual collection will determine the types of equipment required by the library. Standardization of equipment should be observed to simplify instruction in the use of equipment. Unless different kinds of equipment from a range of manufacturers must be acquired for demonstration purposes, it is wise to select a minimum number of brands and to stay with those selected. With a limited number of types of equipment, parts are inter-changeable, volume purchasing may be possible and technical staff quickly become experts in the maintenance and repair of the equipment.

Because of the great range of audiovisual equipment now available, many problems will be faced by the library staff responsible for selecting items for use in the library in both individual and group study situations. In selecting any items of equipment, it is natural that one should wish to select that which is most suitable for the needs of the particular library. When considering purchase of equipment, it is essential that specifications be drawn up stating quite clearly the requirements which the library has for the particular item it intends to acquire. The specifications for a particular item of equipment together with the documents inviting firms to submit quotations for supply are forwarded to each firm known to supply equipment of the type required. Although specifications will necessarily vary from item to item, there are several matters which should be considered when selecting audiovisual equipment for library use. The following are especially pertinent to equipment intended for individual use but in most cases are also pertinent to the selection of equipment for group use in the classroom or in the seminar rooms in the library.

(a) Equipment should be sturdily constructed. If possible, the outer casing should be of an unbreakable material. The equipment should be well finished and attractively designed.

(b) Equipment should be light and portable so that it is easy to carry. This is an essential requirement for items that it is intended to issue on loan.

(c) There should be an absence of an annoying level of noise during the operation of equipment. This is particularly important for equipment used in the library as noisy equipment will be a source of annoyance to persons reading in the library in the area adjacent to the point of use.

(d) In the case of equipment incorporating a light source, such as a slide projector, it is important that the equipment does not become heated during operation as it is possible that a user may inadvertently sustain a burn when the equipment is used for individual study in a confined area such as a carrel.

(e) Controls must be simple in operation and should be clearly marked. As a general rule, for equipment normally used by unskilled operators, the fewer controls, the better.

(f) Equipment selected for independent student study purposes should be suitable for individual use in confined situations such as a carrel. Thus equipment involving the production of sound should be fitted with earphones while projectors should be supplied with lenses permitting them to be used at a very short distance from a screen and still produce an image of suitable size. Unfortunately, there is still a lack of equipment suitable for individual use with some audiovisual media. This is particularly the case with 16 mm films. Projection equipment available is quite unsuitable for individual use. There is a need for 16 mm projection equipment for individual use. Kelley claims that "manufacturers of educational equipment have not kept pace with the current developments in curriculum and educational methodology". (1) But he also realistically assesses the reason for this—the failure of educators to specify the types of equipment required to meet specific educational needs. "Manufacturers cannot be blamed completely for the situation for few educational media specialists have taken the trouble to communicate with equipment suppliers concerning their needs". (2)

(g) There should be easy access to the machine for maintenance and repair purposes, and components subject to wear or deterioration should be able to be replaced easily.

(h) Avoid purchasing equipment that requires special accommodation for its use unless this is really necessary. Such equipment may be satisfactory for group use, but for individual use is wasteful of space. This applies particularly to projection equipment that requires the use of darkened rooms.

(i) As it will be necessary to instruct many users in the use of equipment provided, it is advisable to select equipment for which instruction in use can be provided in the shortest possible time. Complex and highly sophisticated equipment should be avoided as many potential users will react adversely to such equipment.

(j) In selecting equipment, ensure that spare parts and repair facilities are readily available. This is particularly important in the case of colleges which are not situated in the major cities. If it is necessary to send equipment a considerable distance for repairs, the equipment may be unavailable for use for lengthy periods.

(k) Where possible avoid equipment that employs a system of multiple access to a common programme source. This type of system is often used for transmission of programmes in both audio and video formats. It is preferable to use equipment operated by the individual. A wide range of audio equipment is now available for individual use, in particular that employing sound recordings in a tape cassette format. Much of this light-weight and highly portable play-back equipment is available at low-cost and is particularly suitable for library use.

Equipment has now been developed for individual use of video recordings in cassette form. This will be available in Australia shortly and there are firm indications that the cost of this equipment will be reasonable.

Multiple access systems unless employing costly and highly sophisticated equipment which through dial-access permits random access to an almost unlimited number of programmes, have a number of serious disadvantages for both users and library. Normally only a small number of programmes can be played at the one time and scheduling is necessary. This can be a serious problem for a student when a programme which he wishes to see or hear is scheduled for transmission at the same time as a class or practical session.

A user arriving after transmission has begun is forced to wait until the programme is completed before he can see or hear the part he missed.

The user has no control over the programme and is unable to replay sections as he requires. This is a very serious disadvantage in the case of instructional programmes. A member of staff is required to be in attendance to control equipment for the period the facility is available for use.

By providing equipment that is operated by the individual user and by placing materials in open access, the library overcomes the need to schedule staff for the time-consuming and rather tiresome task of operating multiple access equipment and opens the way to the use of the audiovisual resources of the library at all times the library is open and in most instances to its use beyond the library.

It may be found useful to provide some equipment, particularly that used for the play-back of sound recordings, to which additional listening or viewing posts may be added, for example, several sets of earphones may be connected to the same tape player. This will be useful for group use when all members of the group are required to listen to a recording simultaneously. Such equipment does not involve the use of a control centre manned by library staff.

(l) Wherever possible select and standardize upon equipment that accommodates materials available in an encapsulated form. Materials in cassette, cartridge or other capsule form are less susceptible to damage from handling and from the deposit of dust and have a longer life expectancy than materials not in this form such as tapes on open reels.

(m) Check carefully on the range of software available for use with the equipment. This will involve a study of catalogues of materials available for acquisition or hire. An expensive item of equipment has no potential for use in a college if the software developed for use with the equipment does not include a satisfactory range

at the tertiary level. There are two important matters to be considered when investing in audiovisual equipment, there must be adequate software available for purchase or hire and funds to acquire or borrow it and suitably qualified technical staff must be available to maintain and service the equipment. A tendency has been noted in some educational institutions to purchase expensive and often very sophisticated equipment without considering these two matters. Without an adequate range of software to use in the equipment and without technical staff to ensure equipment is in running order at all times, an investment in audiovisual equipment produces very little if any return.

(n) How does the cost relate to the total equipment budget of the library, the cost of other items of equipment which it is intended to purchase, and the cost of similar items of equipment available from other manufacturers? Obviously a library can only buy what it can afford and it is within the budget constraints imposed upon it that the library must select equipment.

(o) Other factors which may be pertinent are obolescence, versatility and reliability. Obsolescence is a continuing problem in the selection of audiovisual equipment. Perhaps the only measure which can be taken to overcome obsolescence, in part at least, is to ensure that there is an extensive range of suitable software available for use with the equipment. Versatility in a piece of equipment has much to recommend it. The micro reader-printer which accommodates both microfilm and microfiche will be useful in a library which cannot afford a separate machine designed specifically for each format. However it will often be found that a machine designed basically for one purpose adapts rather poorly to another and this should be watched for. Reliability is difficult to assess and it will be necessary to rely largely on reports from other libraries and organizations which have installed similar equipment.

The general points raised in the foregoing discussion on selection criteria by no means cover all the issues that should be considered when selecting equipment. They provide broad guidelines only. Wendell W. Simmons summarizes the basic rules of equipment selection that should be observed.

"1. Seek out a machine that will fulfil the particular requirements of your program.

2. If you find a choice, then choose the one that will be most durable and easy to maintain.

3. If there is still a choice, then choose the one that is simplest to operate". (3)

Most librarians have neither the skill nor the means to conduct definitive evaluations of equipment and should seek the assistance of audiovisual technical staff and be guided by reports such as the **Library Technology Reports** published by the American Library Association. These

reports provide objective and thorough assessments of an extensive range of equipment, including audiovisual equipment, which may have applications in libraries. While the reports concern equipment available in the United States they are useful also for Australian librarians as much of the equipment reported is also available in Australia.

Advice should be sought from libraries and other institutions which have invested in similar equipment. The Department of Education in each State has established an Audiovisual Service or similar organization which evaluates equipment for selection for use in schools. The advice of these organizations should also be sought.

When selecting equipment it is useful to know the extent of the range of suitable equipment available. **The audio-visual equipment directory** (4) published annually by the National Audiovisual Association is the most comprehensive directory of equipment currently available. Priced at approximately $8.50 it is a worthwhile investment for libraries developing an audiovisual programme. Each entry includes an illustration of the item and a concise description of it.

Having selected and purchased equipment it is necessary to maintain it in good working order.

Poorly maintained equipment is subject to frequent and unanticipated breakdowns, resulting in annoyance to the user and bad public-relations for the library. A preventative maintenance programme should be established and carried out so that every item of audiovisual equipment for which the library is responsible is inspected regularly and serviced. In the college with a large amount of equipment, this will involve a member of the audiovisual department's technical staff in a considerable amount of work, but this is preferable to a scheme of servicing and repairing equipment only on break-down. In an article, "Keeping your audiovisual equipment in repair", Henry Queen (5) suggests that the four ingredients in a good preventative maintenance programme for audiovisual equipment are scheduling, cleaning, inspection, and lubrication:

Scheduling. Every item of audiovisual equipment should have a maintenance record card attached to it indicating tasks to be carried out and including a record of work done. A programme of maintenance should be developed to ensure each item is attended to regularly.

Cleaning. Dust, lint and deposits from the materials used in the equipment should be removed regularly.

Inspection. After every use equipment should be inspected for missing or loose parts, worn components and defective connection cords.

Lubrication. This should be carried out regularly as suggested by the manufacturer.

Queen's article is particularly useful for the maintenance chart he provides which outlines the procedures necessary for maintaining various items of equipment and the frequency with which the work should be done. The chart could well serve as a model for libraries.

In those libraries where it is not possible for audiovisual technical staff to maintain equipment it is often possible to arrange maintenance contracts with the suppliers. The contract normally covers regular cleaning and lubrication and may or may not include a breakdown repair service. Details of maintenance contracts offered, if any, should be sought from suppliers when considering the purchase of equipment.

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VIII

ACCOMMODATION

Suitable accommodation should be provided within the library to offer users convenient use of the audiovisual facilities available. This calls for careful planning. Planning implies a clear understanding of what is required, a definition of the goals to be achieved. Unless goals are quite clear, it will not be possible to develop satisfactory accommodation for the audiovisual facilities in the library. For librarians in colleges where new library buildings are being planned, or existing ones being renovated, it is a worthwhile exercise to draw up detailed specifications for submission to the architect. The librarian will find it necessary to determine his precise requirements and to define them in such a manner that they can be understood by the architect. The architect will be provided with a clear statement of the functions the building is expected to perform, and will therefore be in a better position to ensure that it does.

In planning the accommodation for the audiovisual services of a college library, there is a need to involve the whole academic and technical staff of the college. Involvement of the academic staff in the planning procedures will ensure that the accommodation designed will meet the instructional needs of the staff, while involvement of the technical staff will ensure that technical requirements are met.

Lee (1) reports on the type of building provided at Mt. San Jacinto College to cater for the needs of a modern "instructional-center-library". The building has been planned to meet specifically stated objectives. Individual study carrels, each fitted with a filmstrip projector and tape recorder, meet the requirements of the particular type of multi-media approach to instruction being explored in the college. The office of the audiovisual co-ordinator is housed in the building as well as offices for instructors who use the "multi-media" instructional method heavily. Small classrooms and small-group rooms are also provided.

It is impossibe to devise a set of recommendations which will meet the needs of every college library planning an audiovisual service. On the other hand, there are certain general matters which will be relevant in most libraries.

A feature of planning accommodation for audiovisual services should be flexibility. Moriarty points out that "unlike the Codex book — which was invented a millenium and a half ago, and remained stable for about 500 years — most audiovisual material is subject to change in form or format on an almost annual basis. Users of audiovisual materials are almost as unstable in their employment (in an architectural context, their development) of a.v. materials". (2)

Accommodation developed for audiovisual facilities must be characterized by flexibility. Few libraries will initiate a programme with all existing media and equipment and adequate provision must be made for the addition of new equipment as required. Flexibility is necessary to cater not only for constant change in the nature of audiovisual equipment and the special requirements that it will have, but also

for changes in educational methods. This is particularly noticeable in the change from the emphasis upon the use of audiovisual materials for large group instruction to their use in individualized and small group instruction. C. W. Stone [3] emphazises the need to design buildings which facilitate individualized study and teaching methods.

What is required then, is suitable accommodation for use by individuals engaged in independent study requiring them to make use of audiovisual materials, and rooms suitable for use by small groups. Small group rooms are particularly versatile catering for group use of audiovisual materials, for use as group study rooms and as seminar rooms. As areas to accommodate large groups will be rarely required, provision of several special rooms suitable for large gorups is normally unnecessary. At the most, one such room may be incorporated into the library, accommodating groups of up to thirty. However, the use of mobile partitions within groups of small rooms provides the possibility of opening them out to accommodate large groups on occasions when this is required. Moriarty [4] supports this view. Kelley [5] finds that libraries incorporating audiovisual facilities are typically designed with inadequate electrical power. Much of the equipment which will be used in the library, requires electric power, and an adequate supply of power points is necessary to ensure that equipment can be conveniently used by students. The increasing trend towards self-contained and portable equipment such as the cassette tape player highlights the need to provide a power point at almost every reader position in the library. In planning a building, it is wise to incorporate the optimum number of power points anticipated for all future use as it is more expensive to install them at a later date. Power grids incorporated in the floor of the library will permit the development of audiovisual facilities in areas other than those immediately adjacent to the walls. This adds considerably to the flexibility of the building. These power grids are quite unobtrusive, but can be easily tapped for future use. Conduits for the distribution of audio and video signals should also be incorporated in the building. However, the development of materials packaged for individual use has overcome the need to incorporate an excessive amount of ducting for future cabling needs as was recommended a few short years ago. There is, nevertheless, need to incorporate some to accommodate on-line transmission of audio and video signals, particularly those associated with remote access systems. [6]

Areas to which the audio and video reticulation system is carried should include the group study rooms. Individual study requirements will probably best be met by incorporation of study carrels within the library. A great deal of work has been done in an attempt to develop a perfect audiovisual carrel. To date its production seems to have eluded designers. Nor does it seem possible that such a carrel will ever be designed because, in providing the perfect accommodation for equipment currently available, it will lose out on flexibility and the possibility of rapid adaptation to new types of equipment as they are developed. John Levett sums up precisely the main issues to be considered in the planning of audiovisual carrels. He says, "The

essential things to remember are that 92% of people are right-handed, but they need space to write and consult notes while looking at and listening to A.V. materials, and that the total, multi-media carrel is a chimera — a major biological revolution is required before we can "read" more than, at the most, two inputs. The combination of one visual and audio source is all that need be planned for in the normal carrel. One final point here — the frequency of video flicker is acutely and irritatingly perceived by the retinal periphery, so video displays do need masking in an open environment". (7)

Carrels should be designed so that they can be easily moved from one location to another. Fixed installations are not necessary and they hinder future re-arrangements. Perhaps the most satisfactory design for an audiovisual carrel is one that incorporates a desk top of approximately 3' in width and 2'6" deep, back and side panels which give the carrel an overall height of approximately 48", a bookshelf and a tubular steel frame. At least two power outlets should be provided. For projection purposes a small screen should be incorporated on the back panel below the bookshelf which will act as a light shield. This arrangement will be quite satisfactory for projection except in areas of very high illumination and is preferable to the provision of expensive and cumbersome rear projection facilities in a carrel. As there will be some difficulty in projecting a suitable image over the short distance available, removable extensions should be available which can simply be attached to the desk on either side of the user. Projection equipment is now available which incorporates a rear projection screen but this is usually bulky and unsuitable for use in the confined area of a carrel. The use of a tubular steel frame for the carrel allows electrical power cords to be passed through its leg in order to tap the power grid which may be in the flooring beneath the location. The design of a carrel should permit alteration to be readily made to cater for future developments. Quinly points out that "facilities designed today will be in use for a minimum of fifteen to twenty years, and that provision must be made for equipment which has not yet been invented". (8) When arranging carrels in groups, a regimented effect of row on row of carrels should be avoided as it is depressing and visually unattractive. Acoustic treatment of the side and back panels of audiovisual carrels is unnecessary as the effect that they will have on confining noise created by equipment being used in the carrel is minimal. Ellsworth in his book, **The school library: facilities for independent study in the secondary school,** (9) provides good examples of carrel design and layout.

Film projectors, particularly 16 mm ones, provide librarians with the problem of noise created by equipment when it is in use. Special areas will be necessary within the library where 16 mm projectors can be used. However, the tradition of darkened rooms is no longer necessary. Daylight screens overcome lighting problems and rooms which are developed for use as projection rooms may incorporate glass panels in walls or doors which will make it very simple for library users to see when the room is not in use as a projection room and thus allow time to use it for other purposes. Group study rooms may, in fact, quite well suffice as film projection rooms. It is quite

possible to equip the film projection room with two or more daylight screens and by providing viewers with earphones to permit simultaneous viewing of two or more films.

In the library which incorporates the audiovisual department of the college, substantial areas must be included for the production of materials and for the maintenance and service of equipment. The extent of these areas will be determined by the size of the department and the range of activities which it undertakes. This is an area which calls for expert planning and the co-ordinator of audiovisual services should be the member of staff responsible for it.

Within the library itself, an area should be set aside for the repair and maintenance of equipment. A location suitable for this may be adjacent to the control desk so that equipment being returned from loan may be checked. A bench, power points and shelves will be required with storage for a small range of tools and spare parts necessary for simple maintenance and repair work. Repair work undertaken in this area would not be of a complex nature and elaborate facilities are not required.

A wide variety of user accommodation must be provided within the library ranging from those that cater for formal study requirements, such as rooms for group viewing and listening and carrels for independent study, to lounge type seating for a more relaxed approach.

The range of furniture available for use in audiovisual facilities is quite large and it should be thoroughly explored in order to select that which will best meet the requirements of the particular library. Tauffner [10] discusses the types of furniture necessary in a multimedia library and discusses possible future trends.

Librarians engaged in planning audiovisual facilities in libraries are faced with two major problems, anticipating realistically future needs and defining the precise requirements which the library has for the audiovisual facilities it wishes to develop. The following check list which is adapted from that developed by C. Walter Stone [11] is offered in an attempt to provide college librarians with a guide to these factors which must be considered in planning audiovisual facilities within a library.

1. The educational goals of the institution and methods of instruction employed.

2. A definition of the library function.

3. The number and kinds of special facilities and equipment which must be provided (identified in terms of subject media forms and formats, clientele and intended use).

4. Amounts and kinds of group facilities versus facilities for individual use.

5. Production, maintenance and repair responsibilities.

6. Particular spaces, furnishings and equipment (needed for materials and equipment storage; maintenance and repair; office activities; individual and group study and use of library resources; previewing; conference works; displays).

7. Lighting and ventilation.

8. Communication control systems (transmission of video and audio signals; dial access).

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IX

OPAQUE MATERIALS

'Opaque materials' refers to those materials, often in a printed form, through which light cannot be transmitted for the purpose of projection. They may include maps, pictures, hand-written papers, art prints and pages from books. Because opaque materials themselves do not constitute a single medium, but in fact encompass a number of media, arrangements for their bibliographic organization will be determined by the particular medium in which an individual item occurs. However, equipment is available which permits the projection of opaque materials and for this reason the category is included in this manual. An opaque projector or episcope may be used for the projection of opaque materials. This particular type of machine has been referred to as "the grand-father of A.V. equipment".

Opaque projectors are normally only used for group instruction and there would be little point in providing one for use by individuals in a library. These machines are often quite heavy. They are difficult to move because of their size and will project successfully only in very dark rooms. They are especially useful for displaying and commenting upon student work and for this reason they should be available for use within a college.

Simons comments on the opaque projector: "Of all projector types the opaque is the least efficient, since light is reflected from the surface to be shown rather than projected through a transparency. Because of this inefficiency, room darkening is a very critical problem and a 1,000 watt bulb is mandatory for good results". (1)

Opaque projectors are also a valuable aid in copying diagrams, maps and charts for display purposes. The projector is used to project an image of the original onto the piece of cardboard, paper, or other material on which the drawing for display is to be made. The cardboard or paper is fixed to a vertical surface such as a wall. To make the drawing it is only necessary to trace the outline of the image projected. This is a quick, simple and inexpensive means of producing large drawings from small originals and will be of value to teaching staff.

To meet any need for an episcope of smaller dimensions, there is the recently introduced "ENNASCOP 3000" which is only the size of the average slide projector and costs about $70. It restricts the size of the material to be projected to 5 inches square and, although it is fitted with a quartz-iodine lamp it has the low illumination level of episcopes in general. It seems the only way to achieve satisfactory results from an episcope is to maximise illumination by use of a Kodak 'Ektalite' daylight screen. In a darkened room the use of a daylight screen results in a very good image while in a normally lighted room a satisfactory image will be obtained.

A range of episcopes is available for purchase in Australia including the following brands —

1. Paul Plus Episcope available from John Hadland (Aust.) Pty. Ltd., 28 Chester Street, Oakland, Vict. 3166.

2. Leitz Wetzlar Episcope available from Pyrox Ltd., (Offices in all mainland capitals).

3. Meopta Episcope available from L. & S. Equipment Pty. Ltd., 76/84 Bay Street, Broadway, Sydney, 2007.

4. Beseler Opaque Projector available from Clifford Audiovisual Pty. Ltd., 49 Market Street, Sydney.

5. Ennascop 3000 available from photographic retailers. Distributors are Rudolph Gunz Pty. Ltd., (branches all States).

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X

TRANSPARENCIES

Overhead transparencies are "transparent acetate sheets containing diagrams, drawings, and/or print which permit good reproduction and enable the instructor to manipulate and develop visual materials through overlay or by writing directly on the surface". (1)

Overhead projectors have many advantages. They can be used in rooms with a normal level of light and darkening is not necessary. The teacher faces the class when using the projector. A large range of prepared transparencies is available. Transparencies are relatively easy to prepare. They are simpler to use than charts and maps and pose fewer storage and carrying problems. Full colour transparencies are available and overlays can be hinged to a basic transparency to provide a build-up pattern. Many models, for example, transparent geometrical shapes, are available for use with overhead projectors. Morris comments — "As long as two or more students together are going to discuss or be lectured on a topic, then a blackboard and hence, better still, a more useful O.H. Projector will be needed. I say 'better still' because if this machine is available, each member of a seminar or discussion group can arrive with a whole bundle of 'blackboards' — flexible ones called 'transparencies' — under his arm. Such an individual-activity procedure would never be possible under routine blackboard teaching conditions". (2)

The popularity of the overhead projector for use in classroom teaching has given impetus to the commercial preparation of overhead transparencies. The most comprehensive listing available is the **NICEM Index to Overhead Transparencies.** Minnesota Mining and Manufacturing Company produces a range of quality transparencies and a catalogue is available on request. Sets of quality transparencies suitable for use in some courses of study associated with engineering are available from Crosby Sensitizing Pty. Ltd. A number of other sources of transparencies is included in the chapter 'Manufacturers, Distributors and Sources of Information'.

Equipment is available for immediate preparation of transparencies from printed sources. Provision of a machine of this type in the library will be of benefit to lecturers wishing to prepare transparencies for class use from printed sources. These machines are infra-red copiers and will produce overhead transparencies satisfactorily only from black and white originals of the same size as required for the transparency.

While transparencies are usually prepared for teaching purposes they are also suitable for individual use. When used by individuals there is often no need to provide projection equipment although at least one projector should be available for use in the library. Because of the low enlargement ratio used in projecting, transparencies are usually readable with the naked eye. They should be rested on a white sheet of paper for ease of reading.

Overhead transparencies purchased from commercial sources and those prepared within the college that seem to have permanent value should be fully catalogued and classified. The rules for cataloguing in **Non-book materials** should be observed. (3).

Storage of transparencies may present difficulties. Those purchased as sets and delivered in boxes or in binders can be simply shelved with the books. Those which are individual transparencies may be enclosed in suitable sized manilla or transparent plastic envelopes and shelved with the books. However shelving individual transparencies with books has inherent problems and it may be felt desirable to store them separately. Standard foolscap size filing cabinets will not accommodate all transparencies. Duff Steel Industries Pty. Ltd., manufacture a filing cabinet with dimensions which permit the accommodation of standard sized transparencies.

Transparencies prepared within the college should be fixed to cardboard mounts. "Scotch" brand masking tape is suitable for attaching the transparencies to the mounts. Materials necessary for mounting transparencies are available from firms such as 3M Company (offices in all States) and Clifford Audiovisual Pty. Ltd.

Several brands of overhead projectors are available in Australia including Buhl, Bell and Howell, Beseler, 3M, Demolux and Jupiter.

Distributors of these projectors will be found in the chapter 'Manufacturers, Distributors and Sources of Information'.

Teaching staff will find the book by Morton J. Schultz, **The teacher and overhead projection** (4) a valuable source of ideas for the use of overhead projectors and transparencies in their teaching.

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XI

SLIDES

A slide may be defined as "a small unit of transparent material containing an image, mounted in rigid format and designed for use in a slide viewer or projector". (1) Slides are most commonly available as 2" x 2" photographic transparencies in colour or black and white 35 mm film.

Slides are easily and cheaply produced by the audiovisual department and by individual members of the faculty and provide valuable resources for teaching staff and students. A self-contained portable kit providing a simple method of producing slides from any printed materials is the "Ektagraphic" Visualmaker (complete with camera) manufactured by Kodak.

Commercially produced slides are available in a wide range of subjects but to locate them it is necessary to consult the catalogue of producers. These are available from agents such as those listed in the chapter, 'Manufacturers, Distributors and Sources of Information'.

Eastman Kodak Company publishes **Some sources of 2 x 2 inch color slides,** a selective list of producers and distributors of colour slides in the United States. This useful publication is available on request from the company at their address Rochester, New York, 14650.

Slides are susceptible to damage. This can be largely overcome by having slides glass mounted. Glass mounting protects the film from mechanical damage and finger prints and holds the transparency flat so that frequent adjustment to the focus is not required when a series of slides is projected. Standard thumb spotting of slide mounts is advisable. A permanent spot is made on the bottom left-hand corner of the mount when the slide is in the position for normal inspection. When the slide is inserted for projection the spotted corner becomes the top right-hand corner. This is useful for loading in subdued light and for ascertaining quickly the correct orientation of transparencies on technical and scientific subjects particularly complex line diagrams.

A range of storage methods is now available. Slide magazines of varying sizes are available for use with projectors. Magazines form suitable storage containers, but have the disadvantage of preventing users from viewing individual slides easily.

Specially constructed cabinets are also available. Slides are arranged on vertical display racks which can be moved on grooves to a position in front of a light box incorporated into the cabinet. While such an arrangement is excellent for dust free and secure storage and permits very easy viewing of slides, it is not satisfactory for a slide collection arranged in a classified order, as difficulty will be experienced in inserting new slides within a sequence. It may involve staff in the repositioning of very large numbers of slides. "Abodia" cabinets constructed by A. Bonacker K.G., 282 Bremen-Lesum, Postfach 113, Federal Republic of Germany, are available in a variety of sizes.

Cabinets containing a number of drawers similar in style to catalogue card trays, are also used for the storage of slides. Drawer storage of slides has similar disadvantages to storing them in slide magazines. Fileguard Co. (Australia) Pty. Ltd., 1340-1344 North Road, Huntingdale, Victoria 3166 supply cabinets for the bulk storage of 35 mm slides. Transparent plastic sheets with suitably sized transparent pockets attached are available for use as hanging files in standard foolscap filing cabinets. Similar sheets are also available for use in binders. These binders can be readily shelved with books. Both sheets are available from AA Hospital Equipment Co. (subsidiary of Accounting Aids Pty. Ltd.), 210 Australia Street, Newtown, N.S.W.

An inexpensive and satisfactory method of storing slides in a bound form which can be intershelved with books involves the use of AA Hospital Equipment plastic sheets designed for use as hanging files. Sheets with twenty-four pockets are cut in two, each resulting sheet holding twelve slides. As many sheets as are required to accommodate a particular set of slides are bound with front and end covers made from high quality cover paper. Binding is carried out using a GBC (General Binding Corporation) punch and binding machine and plastic binding strips. As these machines have won considerable acceptance in educational institutions, some colleges may have them. Libraries in these colleges may be able to make use of the machine for the purpose outlined. If further sheets must be added to a set in the future, the binding can be loosened, the new sheets inserted and the binding then restored. This method has been employed at the Darling Downs Institute of Advanced Education for some six months and binding the slides in this manner has proved popular with both students and lecturers. The cost of binding slides in this manner is approximately twenty cents per binder. This cost includes cover paper and binding strips. The plastic sheets are an additional cost.

When cataloguing slides a major problem arises from the need to decide whether to catalogue each item individually or as sets. The ideal would be to catalogue each item but in practice this is normally impossible because of the time involved. The best guideline that can be offered is to catalogue where possible in sets. Sets should consist only of closely related items so that a subject heading and classification number given to a set is meaningful for all the items in the set. Some of the objections to cataloguing in sets, particularly those concerned with the possible "loss" of a slide which may be of use in a situation quite different from that for which the set was designed, can be overcome by storing the slides in such a manner that they can be readily viewed. If slides are stored in magazines it is difficult to view individual slides without lifting each slide from the magazine or using a projector to project the slides in the sequence in which they are arranged. If slides are stored in the transparent plastic sheets discussed above, they can be very simply viewed by placing the whole sheet over a light box or by lifting it to a light source. Identification and preliminary viewing can take place quickly and conveniently. The plastic sheets are inexpensive and thus it is possible

to use a separate sheet for each class number at which slides have been classified.

It is advisable to arrange slides in classified order so that all slides on the one subject will be located together. If slides are arranged in accession order, items on the one subject will be scattered throughout the whole file and this will cause considerable inconvenience to a user when the collection of slides becomes extensive.

Equipment is available for projecting slides ranging from projectors into which slides must be manually inserted one at a time, to automatic projectors with remote control and incorporating the synchronous use of a tape recording. When selecting slide projectors, the following should be considered in addition to the general criteria for selecting equipment given earlier.

1. Ensure that light output is adequate and that light is distributed evenly over the screen and not concentrated on the centre with poor light round the edges.

2. The temperature of the lamp must not become excessive as this may cause buckling or burning of film. There should be adequate ventilation for the lamp. Forced ventilation is normally necessary for machines using lamps in excess of about 25 watts. Machines should be fitted with heat absorbing filters to protect slides. It is advisable that projectors with fan ventilation should have a separate switch for the lamp so that the fan can continue to operate after the lamp is switched off and so cool the machine.

3. Can the lens be focused easily so it can produce a sharp image of suitable size on the screen intended to be used in conjunction with the projector? Machines to be used in carrels must be fitted with lenses of short focal length so that the image is of adequate size.

4. A tilt mechanism should be incorporated in the machine to permit vertical adjustment.

5. Extra lenses should be available to permit a variety of picture sizes. This is particularly important so that projectors can be used in study carrels as well as in normal projection situations. A zoom lens has a range of focal lengths and if one is fitted to a projector it will provide an image of a given size at various projector distances from the screen. Thus a projector fitted with a zoom lens may be used for individual viewing in a carrel or for group viewing in a room.

6. If the projector is basically designed to operate using magazines of slides, ensure that it can also be used for projection of individual slides inserted manually.

7. Can the projector be adapted for use with film strips. A dual purpose machine may be an advantage in some libraries.

It is often advantageous to have available in the library a number of small and inexpensive slide projectors for use by students in study carrels. While there are a number of such projectors available, two seem to have won considerable acceptance in Australian libraries, especially school libraries. The first of these is manfactured by Hanimex Pty. Ltd., Old Pittwater Road, Brookvale, N.S.W. and is called the "Hanimette" projector. This small slide and film strip projector is suitable for carrel use and is available with a carrying case if necessary. With the carrying case it would be suitable for lending to students outside the library. Individual slides must be inserted manually for projection. The second projector, the "Idaho" is manufactured by Takayama Sangyo, Tokyo and is available from most photographic dealers. This projector can be supplied with a carrying case but does not have a filmstrip attachment. A range of battery operated slide viewers and viewers using available natural light is available and these are suitable for library use by individual readers. The range of larger slide projectors is extensive. Among manufacturers producing these machines are Kodak, Aldis, Hanimex, Leitz and Rolleiflex. Kodak manufactures a portable rear projection unit for use with their Carousel slide projector.

A development which would seem to have considerable educational application is that of the synchronised slide projector and tape recorder. When a lecture or programme is recorded on tape, the projector slide change is activated by pushing the signal button located on the recorder. When played back, a change signal recorded on the tape when the signal button was depressed, will automatically move the slide changing mechanism in the projector to show the next slide. Tapes and slides prepared for such presentation should be treated as parts of the one kit with the tape in cassette form and the slides in their correct sequence in a slide tray.

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XII

FILMSTRIPS

Perhaps the cheapest and most readily available format of audio-visual materials is the filmstrip. Made from 35 mm. positive film, the filmstrip contains a sequence of still pictures which may be projected for individual or group viewing using suitable equipment. Filmstrips are often not considered the important information sources that many of them are. They are what Lembo describes as "the stepchild of the film industry". (1) Perhaps the reason for this is that proposed by French — "The brevity and mediocrity of filmstrips as a class before the Sixties, may well explain their past exclusion from critical consideration". (2) However, she finds that "The situation today has changed substantially. Color has almost entirely replaced the old black-and-white format, and the average new film is almost twice as long as films produced in the Fifties. Sound has been introduced through the use of synchronised records and tapes, and while it has not been uniformly successful, it can at its best add a lively dimension of depth and excitement to the visual presentation". (3) DuKane manufactures production and presentation equipment for synchronised cassette sound filmstrips.

Filmstrips are frequently compared with 35 mm. slides and in some libraries filmstrips are converted to slides. Filmstrips do have some advantages over slides. Individual frames which have been arranged in a particular sequence for projection will not get out of sequence on a filmstrip, as is likely with a set of slides. Also there is no danger of an individual frame from within a set being lost. On the other hand, the disadvantage of film strips can be readily recognised. Cox finds the major disadvantages to be the following — "The pre-set sequence of the filmstrip may be its greatest disadvantage. This requires the showing of the pictures in a given order when a particular group may wish to view the pictures in a different sequence, or may wish to see only selected frames. Another weakness is that when one frame becomes out of date, the entire filmstrip is outdated. A third weakness lies in the fact that filmstrips are easily damaged and difficult to repair". (4)

Although the filmstrip has disadvantages, because of the great range of filmstrips now available and the improved quality of production now evidenced, librarians developing an audiovisual media collection should give considerable thought to the inclusion of filmstrips in the collection. The most extensive guide to filmstrips available is the **NICEM Index to 35 mm Educational Filmstrips.** (5) **The Library of Congress Catalog. Motion pictures and filmstrips** (6) is an excellent guide to an extensive range of filmstrips. Among Australian sources of filmstrips are the following organizations from whom catalogues of the products available may be obtained —

1. State Education Department Audiovisual or Film Centres in each capital. While most of the filmstrips available from these sources are oriented to primary and secondary level of teaching, many of them are particularly useful in the case of colleges with teacher-education programmes. The filmstrips provide teacher-trainees with excellent resources for practice teaching.

2. Angus & Robertson Pty. Ltd., 221 George Street, Sydney, 2000.

3. Educational Media Australia, 201 Park Street, South Melbourne, 3205.

4. Hawthorne Trading Co., 1 Waratah Avenue, Burwood, Vict., 3125.

5. L. & S. Educational Equipment Pty. Ltd., 76/84 Bay Street, Broadway, Sydney, 2077.

6. Encyclopaedia Britannica (Educational Division), 300 Castlereagh Street, Sydney.

French's [7] study on the evaluation of audiovisual materials provides a guide to publications which include reviews of filmstrips. The publications listed will be of value to librarians engaged in the selection of materials.

Filmstrips will frequently be accompanied by other materials, for example, phonodiscs, phonotapes and books. When this occurs, all items in the set should be treated as a kit and catalogued and stored as such. There seems little point in separating the filmstrip from its accompanying materials as this only makes the task of the user wishing to locate the materials in the future more difficult.

When cataloguing filmstrips the rules included in **Non-book materials** should be followed. [8]

Filmstrips should be classified and stored in classified order in the library. Storage of filmstrips will cause problems since the small size of the canister containing the filmstrip is such that it cannot be shelved on its own with books. A number of alternatives is possible. Filmstrips may be fairly broadly classified and stored in pamphlet boxes which are inter-filed with the books. This broad classification will ensure that a number of filmstrips on fairly closely related subjects will be classified together, and this will reduce the number of pamphlet boxes which must be placed on the shelves. A second method which may be used involves the use of specially constructed cabinets with drawers of a size which will suitably accommodate the filmstrip canisters. Duff Steel Industries Pty. Ltd., and Fileguard Company (Aust.) Pty. Ltd., supply this type of storage unit. The major difficulty with cabinet storage is that filmstrips are not on open display. A third method involves the use of a piece of board of suitable dimensions which is drilled with holes into which filmstrip canisters can fit. The board should be large enough to take 6 to 8 canisters. The board may be attached to a standard metal bookend and placed on the shelves with the books. By facing the board outwards, the titles of the filmstrips displayed on the canister lids can be seen easily. For this arrangement filmstrips should be broadly classified to permit those on closely related subjects to be grouped.

Suitable equipment must be available in the library for viewing filmstrips. Filmstrip viewers, such as the Agfascop 10 and 20 manufactured by Agfa which accommodate slides as well as filmstrips and are mains powered are available for individual use, and filmstrip attachments are available for some manually operated slide projectors. Projection equipment should permit both single and double frame images to be projected. The process used in many manually operated filmstrip projectors where the film is almost dragged through the machine is both clumsy and potentially damaging. Improvements in the design of some machines are needed.

At the Royal Melbourne Institute of Technology, a filmstrip with sound accompaniment has been used to good purpose in the reader education programme. The film was designed to create an awareness of the holdings and services of the library and to instruct students in the use of the library. A taped commentary was prepared to accompany the filmstrip. The filmstrip and its accompanying tape are used in a DuKane automatic tape sound filmstrip projector.

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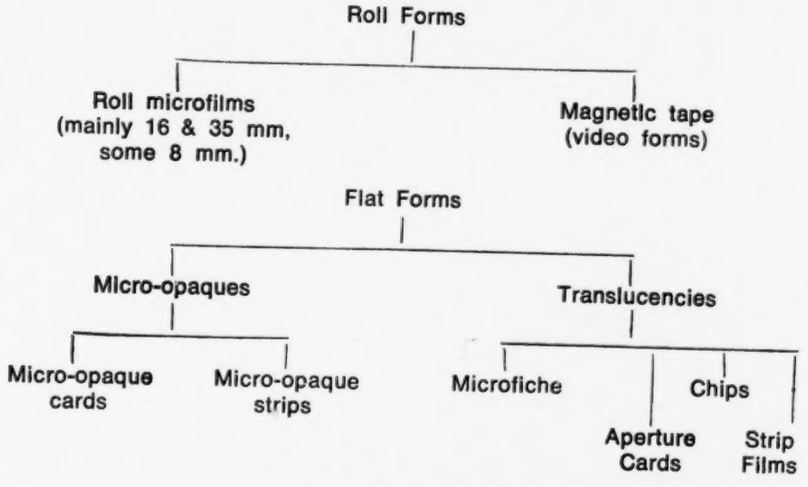
XIII

MICROFORMS

Microforms or microreproductions (1) are miniature reproductions on transparent or opaque stock of printed or other graphic matter which cannot be utilized without magnification. Several types of microforms are available including microfilm, microfiche, ultra-microfiche, micro-opaques and aperture cards. Basically microreproductions are available in two forms, roll and flat, and in the following materials, translucent film, opaque materials and magnetic tapes.

The figure below is taken from one presented by Williams in **Evaluation of microrecording techniques for information and data storage and retrieval** (2) and indicates the various permutations of format and material.



In libraries, microforms in most common use are 16 and 35 mm roll microfilms, micro-opaque cards and microfiche.

Microfilm consists of microreproductions on a roll of film. 35 and 16 mm film are in current use and there appears to be a trend towards greater use of the 16 mm size than the 35 mm size. Several manufacturers have developed containers, such as cartridges, for microfilm in order to dispense with the use of reels, thus offering added protection to film from soiling and scratching.

The chief advance from roll film is the microfiche, a unitized form of microreproduction produced on a flat sheet of film. Although microfiche are produced in several sizes, F. D. Crawford in **The Microfilm technology primer on scholarly journals** considers the 4 x 6 inch size fiche will remain the standard in the foreseeable future (3). However, fiche in other sizes are also in use and some libraries tend to favour a 3 x 5 inch size perhaps because it can be filed in a catalogue cabinet. Microfiche have the advantage over roll film of

unitizing information thus providing the opportunity for a number of persons to consult the file at the same time. Microfiche are somewhat easier to consult than microfilm as they eliminate the procedure of reeling through films searching for particular pages. With fiche, an individual page can be located very quickly. Microfiche require less filing space than microfilm and are more suitable for mailing as it is possible to mail them in standard envelopes. They are less susceptible to scratching than roll film which must be passed through glass plates and over rollers when being viewed. On the other hand, problems may arise in maintaining file integrity when the file contains a large number of microfiche. Misfiling would, in time, create considerable problems. W. D. Wheeler in an article "Microfiche — a progress review" (4) traces the history of microfiche and suggests advantages which this form offers in libraries.

Micro-opaque cards, or microcards as they are generally referred to, are microreproductions on opaque material. Microcards appear in various sizes including 3" x 5", 4" x 6", 5" x 8" and others. While they are sturdy and can withstand heavy use without being damaged, there are certain disadvantages connected with their use as Veit points out. "Some kinds of microcards are more susceptible to message obliteration by scratches and erasures than microfiche. Reading machines require relatively powerful light sources. With film (fiche) one can obtain a sharper image and a higher reduction ratio than with micro-opaques, and since microfilm is now much more widely used than micro-opaques, manufacturers have devoted more attention to the development of film readers and printers than to readers for micro-opaques. The result is that there is no satisfactory reader-printer available for microcards". (5) Williams says, "The micro-opaque is considered to have failed to meet user requirements and further micro-opaque publishing activities should be discouraged". (6)

Microfilm has gained in popularity because of the advantages which it offers to libraries. Crawford suggests its major advantages are "1. Microfilm preserves documents and rare materials. It permits complete sets to be established. 2. Copies of originals can be made readily accessible in fascimile form for all information purposes. 3. Microfilm conserves space and minimises storage costs. 4. Microfilming is the least expensive process for producing a single copy. 5. Distribution of microfilm copies is simple and far less expensive than mailing the originals. 6. Binding costs are minimised. 7. Microfilm editions are never out of print. 8. Microfilm is a versatile information tool in that it can be used as a basis for printing future microforms and/or making enlargements to original size". (7)

To date, the use of microforms in libraries has been restricted in the main to low activity applications or to applications where there is no alternative to their use, for example, the use of microfilm editions of rare and out-of-print publications. Williams finds that the applications of microforms in libraries have generally been confined to the following:— "1. The recording of little used originals, space for which would be otherwise unjustified — early runs of serial publications is

an example. 2. The recording of publications in large formats inconvenient in full sized form for storage and handling — typified by newspapers. 3. The recording of originals produced on impermanent base materials again typified by newspapers but applying also over a longer term to books, especially those subjected to heavy use or unsuitable storage environments. 4. The recording of out-of-print or rare works and unpublished documents. This group includes university theses which are published but in extremely short runs and such things as parish records which are unpublished". (8)

Dupuy suggests that the potential applications of microforms in libraries do not yet appear to have been thoroughly investigated and calls for further research into the use of microforms especially to overcome some of their drawbacks. (9)

Two interesting applications of microforms were noted at the Technical Teachers' College, Hawthorne, Victoria, where microfilms provide an alternative to the usual systems of handling ephemeral materials, cuttings, some pamphlets and magazine articles. The material is photographed on microfilm and the film inserted in microthin plastic jackets. These provide all the usual advantages of storing and handling which arise from microfilm formats. The second application is one which is being used to meet some of the programmed instruction needs of the college. Programmes are prepared on paper, photographed on to microfilm and the film inserted into the microthin plastic jackets. The jackets are made available for student use. The programmes are read on microreaders, each student following his own programme at his own pace. Although this type of programme does not make allowance for branching in the usual sense, it is believed that the necessary branching can be built into the programme by inserting alternatives and other devices.

Clearly for many college libraries it is impossible to develop serial collections sufficient to meet reader demands by relying on the chance acquisition of backruns in the original form. The opportunities for locating backruns of many serials are limited and the costs of acquisition, binding and storing are often prohibitive. Microform editions of many serials and also of many out-of-print monographs are now readily available and in many cases they are quite reasonably priced.

Although there are no critical selection guides to assist the librarian acquiring microfilms, there are a number of publications which will prove of assistance. **Guide to Microforms in print** (Washington, Microcard Editions) is an annual publication priced at approximately $6.00. It includes books, serials and other materials which are available on microfilm or in other microforms from publishers in the United States. Theses and dissertations are not listed. Prices taken from publishers catalogues are included. The guide is of particular value to librarians engaged in locating backruns of serials in microform editions. Most major publishers of microforms in the United States are included in the guide.

University Microfilms, a Xerox Company, publishes a great number of serials in microfilm editions. The company's catalogue, **Serials on Microfilm,** gives full details and is available on request from the publishers at their address, 300 North Zeeb Road, Ann Arbor, Michigan, 48107, U.S.A. Their publication **O-P Catalog; out of print books** is also available on request. It lists those out-of-print monographs available from University Microfilms as xerographic or microfilm copy.

In Australia, W. & F. Pascoe Pty. Ltd., 2A Glen Street, Milson's Point, N.S.W. 2061 and University of Queensland Press are two organisations from which microfilm editions of publications, particularly newspapers, are available. W. & F. Pascoe Pty. Ltd., have current editions available of a number of Australian newspapers as well as backruns. The University of Queensland Press has available microfilm editions of a number of historically important publications, for example, the pamphlets of Rev. Dr. John Dunmore Lang. They also have available a number of doctoral theses. Other overseas publishers from whom catalogues are available include —

Interdocumentation Co., A.G.
Poststrasse 9
Zug, SWITZERLAND.

Micro Methods Ltd.
East Ardsley,
Wakefield, YORKSHIRE,
ENGLAND.

General Microfilm Company,
100 Inman Street,
CAMBRIDGE, MASS. 02139, U.S.A.

Bell and Howell,
Microphoto Division,
Old Mansfield Road,
WOOSTER, OHIO 44691, U.S.A.

NCR/Microcard Editions,
South Oak Street,
West Salem,
WISCONSIN, U.S.A.

Readex Microprint Corporation,
5 Union Square,
NEW YORK, N.Y. 10003, U.S.A.

3M IM/Press,
Box 720,
Times Square Station,
NEW YORK, N.Y. 10036, U.S.A.

Roma S. Gregory in an article "Acquisition of Microforms" (10) provides an excellent guide to handbooks, bibliographies and other sources of information for the acquisition of microfilms.

Orders for microfilms should be made direct to the publisher. It is important to state whether positive or negative film is required. Negative film is required if a black on white print-out is desired, and this is usual with reader-printers currently available.

Cataloguing, Classification and Preparation

As with all other materials, the library's microform collection must be catalogued and classified. "The content of microform materials does not differ from book form publications, and hence it ought to be considered an integral part of the library's collection, i.e., each microform entry should be fully classified and catalogued, with author, title and subject and added entries filed in the public catalogues". (11)

In **Non-book materials** (12) guidelines for cataloguing microforms and examples of cataloguing are given on pages 19-20. It is recommended that these guidelines be adopted for use in college libraries.

In those cases where a library acquires a microform edition of an item already held in hard copy, the simplified method of cataloguing outlined by Nitecki (13) deserves consideration. If the library has both the original and microform versions of the same work the microform is treated as an added copy and only a separate shelf list card is prepared for the microform entry. A note added on the cards for the item in book form ties the two versions together. The reverse procedure is followed when the library acquires a book form edition of an item which is already catalogued as a microform.

A major cataloguing problem is presented when the library purchases large works on microform as for example, "Three Centuries of Drama". There are a number of publishers of microfilms who are systematically reprinting the texts listed in major bibliographical works. If a library purchases a set of works in microform of this type what arrangements will be made for cataloguing? June Thomson (14) surveyed Canadian university libraries in an attempt to establish cataloguing procedures employed for large works on microform. She found that librarians differ as to how these works should be treated. One school of thought seems to be that every text in these microform collections should be represented in the catalogues as fully as the hard copy edition would be, whether or not there is a good printed bibliography in which library holdings could be indicated. The other suggests that the works should be catalogued as a single large work with reference on the card to the printed bibliography. Although there appears to be an increasing trend on the part of publishers of this type of work to supply catalogue cards for the items included in the series, there is no clear cut solution to the problem.

The most common method of storing microforms has been the use of multidrawer microfilm cabinets especially designed for the purpose. These cabinets are manufactured in Australia and are available from a number of suppliers including Kodak (Australia) and Duff Steel Industries Pty. Ltd.

A major disadvantage of such cabinets is that the contents are not on open display and this tends to discourage use. Microfilms are normally supplied in sturdy cardboard boxes and these may be stored on standard adjustable library shelving. The most desirable form of storage is intershelving with the books. This is particularly valuable when backruns of serials are purchased to supplement hard copy editions already held. In order to protect the microfilms from the weight of the bound volumes, it is recommended that they be stored in pamphlet boxes adjacent to the bound copies. When the microfilms are not stored with the bound volumes, it is recommended that a "dummy book" giving full details of the items on microfilm with their location be filed with the bound volumes. With microfiche the only feasible method of storage seems to be that of multidrawer microfilm cabinets.

Microcards which are supplied by sets in boxes may be shelved with books.

By their very nature microforms can only be read (except for eye-readable titles) when equipment is used which will magnify the information carried by the microform to a degree which makes it legible to the unaided eye. A considerable range of equipment is now available for library use.

The matters raised in the general section on the selection of equipment should be kept in mind by the librarian purchasing microform readers and reader-printers.

Several reports in the **Library Technology Reports** (15) provide librarians with excellent guides to the types of equipment available and their calibre. In the report on "The Selection of a microform reader" (16) the Library Technology Project consultants stress that the following matters be considered when selecting equipment:—

1. The present and planned collection of micro-image formats.

   The exact range of formats which the machine will be expected to cope with must be decided prior to selection. Some equipment will cater for only one format while other equipment will accommodate several types of microforms.

2. The extent of magnification possible.

   The closer the reduction ratio of the micro image equals the magnification provided by the reader, the closer to the size of the original document will be the size of the image obtained. For example, if a document is filmed at a reduction ratio of 1:18, a reader working at a magnification of 18x would provide an image the same size as the original. Adequate magnification is essential if persons using the equipment are to be able to read images comfortably. With some machines a range of lenses is available to provide different levels of magnification.

3. The size of the reader's screen.

   For reading newspapers and fairly large sized documents a screen as close as possible in dimensions to the original document is desirable. As this is not possible to obtain on most machines, then the machine should be equipped with a mechanism which permits the image to be moved backwards and forwards across the screen in order to scan it.

4. The clarity of the image produced on the screen.

   The image should be sharp and clear from edge to edge. The screen brightness should be of uniform level and bright enough for comfortable viewing. The image should remain in focus when the microform is moved from frame to frame and the screen should be treated with an anti-glare device to permit reading under reasonably normal levels of illumination.

5. Image rotation.

   It should be possible to rotate the image so that images which are recorded in the vertical as well as the horizontal position on the microform may be read with ease.

6. Simplicity of operation.

   Changing lenses and lamp bulbs should be simple operations. If a reader-printer is required, the printing mechanism must be able to provide clear, dry, permanent prints quickly and economically. It is advantageous if, in addition to manual drive, a motorised drive with variable speeds on advance and rewind is provided on a machine designed to use roll films.

Suitable accommodation must be provided for library readers wishing to make use of the microform collection. Each reading desk must be large enough to accommodate a microform machine and provide space for note taking. Standard study carrels are not large enough for the purpose. Minimum table space provided should be 2'6" x 4', while a space of 3' deep by 5' in width is desirable.

David C. Weber in his article "Design for a micro-text reading room" (17) provides librarians with a useful guide to accommodation requirements.

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XIV

MOTION PICTURES

Motion picture films commonly used in libraries and educational institutions are available in a number of formats including a 16 mm — usually on open reel, standard 8 mm and super 8 mm. 8 mm films are available on open reel, as loop flims in cassettes and in cartridges. Super 8 mm film is also available with magnetic or optical sound tracks. 8 mm has won considerable acceptance for educational purposes in recent years. Forsdale (1) suggests the reason for this is the greater accessibility to the reader that 8 mm has over 16 mm film. He suggests that the major characteristics which make 8 mm. film so accessible, are

1. the ease with which it can be used in cartridges;

2. the relative cheapness and compactness of 8 mm equipment and prints;

3. the availability of 8 mm self contained rear screen projectors.

The availability of a large range of 8 mm loop films suitable for use at the college level of instruction has provided the college librarian with an excellent opportunity to develop a relatively inexpensive first rate collection of motion pictures. Loop films, sometimes referred to as single concept films, are normally restricted to approximately four minutes in length.

As it seems that the use of standard 8 mm film is being phased out, librarians would be unwise to purchase materials in this format, and should restrict purchases to super 8 mm formats.

Standard 8 mm film incorporates perforations used in 16 mm film. A later development reduced the size of the perforations, leaving more film area for the picture. This film is known as super 8 mm. Since the perforations for 8 mm and super 8 mm are of different size and spacing, machines designed solely for the standard 8 mm format will not accommodate super 8 mm film while machines designed solely for use with super 8 mm film will not accommodate standard 8 mm film. Machines are available which will accommodate both formats. Such machines would be useful in libraries with collections of both standard and super 8 mm film.

While it is possible to have films produced within the college made available in loop film format, there is the disadvantage that the loading of the cassettes must normally be carried out by the agents of the manufacturers. Recently several manufacturers including Bell and Howell, Kodak and Paillard Bolex have developed 8 mm projectors which operate automatically using 8 mm films loaded into cartridges. The loading of the cartridges is an extremely simple process and can be done within the college. The length of the film which can be loaded into a cartridge is very much greater than that which can normally be loaded into a loop film cassette.

Technicolor has developed a machine employing Super 8 optical sound film in cartridges. Two sizes of cartridge are available, 220' and 580'.

Machines are available for 8 mm. films which incorporate a rear projection facility. This type of machine is of value in group presentations as it eliminates the need to set up a screen and to darken the room. Projectors of this type are manufactured by Technicolor and Paximat.

The **Australian photography photodirectory** published annually by Globe Publishing Company of 321 Pitt Street, Sydney, provides information on most photographic equipment and materials marketed in Australia and would be of value to those involved in selecting equipment for motion picture films and other film formats.

There are problems associated with the development of a film collection, particularly a 16 mm film collection — the films are relatively expensive, regular and careful maintenance of equipment and materials is necessary, and equipment for the projection of 16 mm films is expensive. However, the cost of projection equipment for 8 mm film is reasonable.

Although films may be relatively expensive, the range available is most considerable. A number of selection aids including review publications is available. Among the more important are the following —

1. **NICEM Index to 16 mm Educational Films.** (2)

2. **NICEM Index to 8 mm Educational Motion Cartridges.** (3)

3. **Library of Congress catalogue. Motion pictures and film strips.** A cumulative list of works represented by Library of Congress printed cards. Washington, Library of Congress. (published quarterly with annual and quinqennial cumulations). This publication attempts to cover all films of educational or instructive value that are released in the United States or Canada.

4. National Library of Australia. **Catalogue of 16 mm films, 1960.** (4) This is supplemented by **Film acquisitions** now published quarterly with annual cumulations.

5. **Australian Films. A catalogue of scientific, educational and cultural films, 1940 to 1958.** Canberra, National Library of Australia, 1959. Supplemented by the monthly publication **Australian Films** which cumulates annually. This publication lists films produced in Australia, not all of which are represented in the film collections of the National Library.

6. **The British National Film Catalogue.** London, British Industrial and Scientific Film Association. (Bi-monthly). This publication lists British and foreign films which have become available in Great

Britain. They are classified by subject with alphabetical indexes under subject and title, distributors, production companies, sponsors and technicians. Although an annotation accompanies each entry, it is not evaluative.

7. **Film User** (incorporating **Industrial Screen**). Croydon, Surrey (Monthly). This publication offers reviews of 16 mm documentary educational, factual and industrial films, 8 mm cassettes and film strips.

8. **Monthly Film Bulletin.** London, British Film Institute. (Monthly). Evaluative reviews of a high standard.

9. **Landers Film Reviews.** Los Angeles, Landers Associates. (10 per year). This publication is highly respected for its independent and trustworthy reviews of documentary and educational films released in the United States.

10. **EFLA Evaluations.** New York, Educational Film Library Association Inc. (Monthly). These evaluations are printed on 3" x 5" cards and for each film review provide full bibliographical details, synopses, areas of possible use and indications of age level, comments on the film and a rating.

11. **Films for Universities** published by British Universities Film Council Ltd., Royalty House, 72 Dean Street, London. This publication, a new edition of which is due to be published some time during 1971/72, provides a useful guide to films which are suitable for use at the university and college level.

Several Australian distributors of films are noted in the chapter on 'Manufacturers, distributors and sources of information.'

Non-book materials [5] includes rules for cataloguing of motion pictures and these should be followed. Clugston [6] outlines the development of film cataloguing at the Library of Congress and discusses areas of proposed change including the addition of grade-level designations to printed cards. A comparison is made between the **Anglo-American Cataloging Rules** and the rules developed by the Department of Audiovisual Instruction of the National Education Association (DAVI).

No difficulty will be found in inter-shelving loop films with books as they are normally supplied in containers which lend themselves readily to labelling and storing with books on standard steel shelving. However, difficulties may arise when attempts are made to inter-shelve 16 mm films with books because of the size of the containers and their tendency to roll off the shelves. 16 mm film is a medium which may need to be shelved independently rather than with the books. Duff Steel Industries Pty. Ltd. manufacture storage units specially

designed for 16 mm film reels. 8 mm film on spools may be stored in units similar to those used for 16 mm film on spools. 8 mm film on spools may be shelved with books if it is stored in BASF tape boxes. It will be found that a 200ft. spool will fit in a box designed for a 5 inch spool of tape and a 400ft. spool will fit in a box designed for a 7 inch spool of tape.

Cartridges for 8 mm film are supplied in sturdy cardboard boxes which are quite suitable for intershelving with books.

Librarians wishing to develop storage facilities which will provide optimum conditions for the preservation of film are referred to Calhoun's article, "The preservation of motion picture film". (7) Calhoun discusses the problems associated with preserving films and outlines steps which may be taken to protect them. A large range of equipment is available for motion picture film in its various formats and some of the Australian sources of this equipment are provided in the chapter on "Manufacturers, distributors and sources of information".

Many smaller college libraries which do not have the financial resources to develop a collection of 16 mm films to support their teaching programmes, may wish to borrow films from film libraries which permit lending. The following is a list of some of the more important film libraries in Australia which will lend films to educational institutions.

1. Australian Atomic Energy Commission,
   Research Establishment,
   Private Mail Bag,
   SUTHERLAND. N.S.W. 2232

2. B.P. Australia Ltd.,
   STATE CAPITALS

3. Bank of New South Wales
   (Through main branches)

4. British Council,
   18-20 Greenoaks Avenue,
   EDGECLIFF. N.S.W. 2027

5. British High Commission,
   ALL STATE CAPITALS

6. C.S.I.R.O.,
   314 Albert Street,
   EAST MELBOURNE. VIC. 3002

7. Conzinc Riotinto of Australia Ltd.,
   95 Collins Street,
   MELBOURNE. VIC. 3000

8. Copper and Brass Information Centre,
Northgate House,
321 Kent Street,
SYDNEY. N.S.W. 2000

9. Department of Education
(consult your State centre)

10. Division of Occupational Safety,
Department of Labour and Industry,
135-147 George Street,
BRISBANE. QLD. 4000

11. Embassy of France,
6 Darwin Avenue,
YARRALUMLA. A.C.T. 2600

12. German Embassy,
Empire Circuit,
YARRALUMLA. A.C.T. 2600

13. Imperial Chemical Industries of Australia and New Zealand,
1 Nicholson Street,
MELBOURNE. VIC. 3000

14. International Nickel Australia Ltd.,
406 Lonsdale Street,
MELBOURNE. VIC. 3000

15. Italian Embassy,
Commercial Office,
126 Philip Street,
SYDNEY. N.S.W. 2000

16. Mullard-Australia Pty. Ltd.,
35-43 Clarence Street,
SYDNEY. N.S.W. 2000

17. National Library of Australia,
Film Collection,
Parkes Place,
CANBERRA, A.C.T. 2600

18. Shell Film Library,
Shell Co. of Australia Ltd.,
ALL MAINLAND CAPITALS.

19. Sixteen Millimeter Australia Pty. Ltd.,
ALL MAINLAND CAPITALS.

20. State Film Centre
(Separate centre in each State. Do not lend interstate).

21. Wild (Australia) Pty. Ltd.,
291-295 Sussex Street,
SYDNEY. N.S.W. 2000

The following publications provide information on other film libraries in Australia.

1. The Federation of Victorian Film Societies. **1970 index of 16 mm film libraries.** This publication is available from the Hon. Secretary at 4 Stanley Grove, Canterbury, Vic. 3126 at a nominal charge.

2. N.S.W. Film Council. **Film Libraries in N.S.W.** This publication is available from the Council at 85 Market Street, Sydney.

3. National Library of Australia. Film Division. **List of 16 mm film libraries.** Canberra. (N.D.)

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SOUND RECORDINGS

Sound recordings are currently available in two major formats, phonodiscs and phonotapes. These are the media designations recommended by Riddle, Lewis and Macdonald and are used here as possible future standard designations. The terms are used by the Library of Congress in its cataloguing. A phonodisc is a recording of sound on a disc and is referred to commonly as a record or gramophone record. Phonodiscs are produced in diameters of 7", 10", 12" and 16" and at playing speeds of 45, 78, 33 1-3 and 16 2-3 revolutions per minute. The most commonly used form of phonodisc is the 33 1-3 RPM microgroove recording which may be in monophonic or stereophonic form. Some recordings are available in both monophonic and stereophonic versions. Both types can be played on stereophonic equipment but stereophonic effects can be produced from stereo recordings only if they are played on stereo equipment.

A phonotape is a recording of sound on magnetic tape. Phonotapes, both monophonic and stereophonic, are available on open reels and in cassette form. Open reels are available in a variety of sizes and recordings for general use are made at speeds of 1⅞, 3¾, and 7½ inches per second. Cassette tapes have advantages for library use over open reel tapes because they eliminate the need to thread the tape onto a machine and overcome the problem of tape spilling from a reel when the reel is dropped. As the tape is entirely enclosed within the cassette, it is protected to a great degree from deposits of dust. The most common sizes are those that play for 60, 90 or 120 minutes. Because of the popularity of cassettes, some commercial recording firms are now making available their recordings on cassettes as well as on phonodiscs and open reel tapes. Libraries are well advised to take advantage of this development. Cassettes are much less susceptible to damage than phonodiscs, storage problems are negligible, and inexpensive portable playback machines are now available which can be used within the library and on loan. Where copyright provisions permit, libraries would be well advised to transfer onto cassette tapes, their collections of recorded sound. Cassettes do have some disadvantages. The tape must be used to its length or wasted. Thus if a forty-minute recording is made on a sixty-minute tape some twenty minutes of tape is wasted. The alternative is to make use of the remainder by recording something of twenty minutes duration or less and which is reasonably well related to the first part of the tape. However for cataloguing purposes it is advantageous to have only one recording on each tape. Cassette tapes can only be edited by re-recording but this is not a serious disadvantage as the operation is a simple one. There is also the problem that when a tape in a cassette breaks, the tape and its contents are lost if the cassette is one in which the two halves are welded together. For this reason, it is advisable to purchase only cassettes which have their two sections screwed together.

A wealth of recorded material is available which would be of value for the college library. Fortunately for the librarian responsible for selecting recordings, several publications are available which will

prove of great assistance. **The Gramophone** contains reviews which provide a very comprehensive coverage of all types of recordings issued in the United Kingdom. The reviews which are by competent musicians and scholars are very trustworthy. **Spoken word and miscellaneous catalogue** published annually by the publishers of **The Gramophone** lists 33 1-3 and 45 r.p.m. microgroove recordings of spoken word. No reviews are provided. **The Gramophone classical record catalogue** is published quarterly and acts as an index to reviews in **The Gramophone.**

For recordings released in the United States but not in the United Kingdom, **Stereo Review** (formerly **Hi Fi Stereo Review**) is a useful selection aid.

The Schwann record and tape guide published monthly by W. Schwann Inc., Boston, lists long playing 33 1-3 rpm records and tapes currently available in the United States. Until February 1971, this publication was known as **Schwann long playing record catalog.** A supplement to the Schwann guide published twice yearly lists "miscellaneous" recordings including spoken word and documentary records.

The Musical Quarterly provides scholarly and detailed reviews of many of the more significant recordings available.

For the library beginning or developing a collection of records of the spoken word, the book **Spoken Records** (1) by Helen Roach provides an excellent guide. Professor Roach has selected carefully from the great range of records available and those items included in her bibliography are, generally speaking, the best available in the particular fields.

She includes bibliographical essays on documentaries, lectures, interviews and speeches, authors reading, readings by persons other than the authors and plays. A wide range of poets, novelists, dramatists and essayists, is included. Her suggestions for a basic "Spoken record library" merits the attention of all librarians concerned with establishing a spoken record collection.

The Open University, London has available for purchase tape recordings of lecture series conducted by the University. A catalogue is available on request from the University.

A number of manufacturers of recordings of more immediate educational value have established agencies in Australia and it will be found more convenient to order recordings from these local agents than to import them from their overseas sources. However most agents do not hold a wide range in stock.

Cataloguing

A search of the literature reveals a considerable number of articles published on the cataloguing and classification of sound recordings (2). Most of them report systems which have been developed for use within a particular library or library system. In a college

library it is strongly recommended that the method of cataloguing outlined in **Non-book materials** (3) be followed closely and that the same classification scheme in use for the book materials of the library be used for the sound recording collection. In cataloguing phonodiscs it is recommended that in addition to the requirements given in **Non-book materials** playing time also be included. This should be included in a "Duration" note as indicated on page thirty-nine for cataloguing phonotapes.

It may be important for the teaching staff to know the duration of a particular recording as this could influence the use they make of it in their teaching programme.

Storage

In preparing tapes and discs for library use, care must be taken to ensure that they are housed in suitable containers. Although tapes in both the open reel and cassette form normally are purchased in containers of some type, instances will be found in which not all containers are suitable for use in the library as they are not sturdy enough to protect the reel or cassette. Perhaps the best containers available are those manufactured by BASF. These are made of sturdy plastic and are eminently suitable for intershelving with books. They are designed to look very much like a book and are provided with a suitable edge which may be used in the same manner as the spine of a book. Labels identifying the material can be attached to the spine edge of the box.

In libraries where the phonodisc collection is kept in closed access, it is advisable to offer users the possibility of inspecting the record covers. An arrangement often seen in retail stores has application in the library. Phonodiscs are removed from their original covers and inserted in stout, manila substitutes. The original covers are stored in record bins or boxes where users may browse through them as they wish. Record tubs suitable for this purpose are constructed by Duff Steel Industries Pty. Ltd.

Clear plastic jackets suitable for use with 12" microgroove recordings are available for use in libraries where phonodiscs are available on open access and for loan. These jackets are available from Raeco Library Supplies and each jacket has a clear plastic pocket attached to it which is designed to accommodate a loan card.

Although phonodiscs are not seriously affected by the normal ranges of temperature and humidity, they should not be stored near excessive heat or exposed to direct sunlight over long periods because they tend to warp when the temperature exceeds approximately 120 deg. F. One of the major dangers in lending phonodiscs is that the borrower may not realise the damage that can occur if a disc is left for a period in direct sunlight or near an area of excessive heat. Phonodiscs should be stored vertically to avoid warping and should not be piled flat, or stored on an angle. Because of their size, 33 1-3 12" records are difficult to inter-shelve with books and provision of special storage facilities is usually mandatory.

Shelving approximately twelve inches deep may be used with pamphlet boxes to hold the records. Pigeon holes of suitable dimensions are a popular means of storing phonodiscs. These may be made of wood with fixed or adjustable vertical dividers. Fixed steel shelving with steel dividers bolted to the shelving can also be used. Duff Steel manufacture a record file shelf which stores up to 220 phonodiscs supported vertically by metal plates. It would be possible to hang such shelves among the shelving used for books if required.

Phonotapes in cassette form can be very easily inter-filed with books. However, care must be taken to ensure that phonotapes are not stored or handled near any place or machinery where a strong magnetic field may develop as this may tend to distort or erase recorded information. Even to place a phonotape on or near a TV receiver is sufficient to incur this danger of magnetic influence. Boxes containing phonotapes on reels should always be stored on the edge of the box because if they are stored flat, the tape may suffer serious edge damage by its own weight on the inner face of the reel.

Equipment

The equipment that any library purchases will be dependent upon the range of formats included in its collection of sound recordings. In the library which standardizes upon cassette tapes, it is suggested that lightweight portable players be purchased. These may be used both in the library and on loan. A range of these machines is now available commercially. Machines which record as well as play-back will not normally be required and tape players (machines which play-back only) will meet most requirements. It is useful to have a recorder in the library as well as the players so that the library can use it for recording purposes. If recorders are provided, the problem exists that the user may inadvertently or deliberately erase the information from a tape which is being used in the machine. On the back-edge of tape cassettes two small plastic tabs will be found. If these tabs are removed, it will not be possible to record information on the tape. When, at a later date, it is desired to use the tape for recording purposes, a strip of cellulose tape placed along the edge of the cassette will permit this to be done.

If open reel tapes are included in the collection, machines must be made available to utilise them. Portable machinery is preferable to that which is fitted in a fixed location. Most reel-to-reel machines incorporate both recording and play-back facilities. On machines used for general play-back purposes only in the library the record and erase facility can be disconnected to avoid the possibility of recorded material being erased inadvertently by users. Open reel recorders should be capable of being played at the three major speeds in use, 1⅞ inches per second, 3¾ i.p.s. and 7½ i.p.s. The 1⅞ i.p.s. speed is the most suitable for library use when the library makes its own recordings as for spoken word and indeed for much music, the ordinary ear cannot tell the difference in fidelity given by the higher speeds. Using the slower speed much more information can be recorded onto a tape and it results in greater economy. A tape recorder for library purposes should not be one limited to two tracks. The

four-track recorder gives twice as much recording for the outlay on tapes — four tracks of mono recording or two double tracks of stereo recording. Furthermore published tapes in two-track form can be played on four-track recorders but four-track tapes cannot be played on a two-track machine.

The library which develops a collection of phonodiscs has two courses of action open to it. It may either keep the collection on closed access, not allowing students to handle recordings, providing a service by which records are played at a central location and the sound transmitted to listening stations in the library, or it may place the recordings on open access and allow students to make use of them themselves within the library and on loan. In the latter case, record players must be made available for student use. Record players for the library must be equipped with a diamond stylus capable of playing both mono and stereo recordings and should have a device for gently lowering and lifting the pickup in the required place. There should also preferably be a device for cleaning records while they are being played. The machine should also have an automatic cut-out on the motor when the end of the record is reached. Although it is common for players to have three speeds, 45, 78 and 33 1-3 revolutions per minute, it is advisable that machines for library use do not have a 78 rpm facility except perhaps on one machine in case the need arises. On a three speed machine, 78 rpm records require a different stylus, usually brought into action by rotating the part of the pickup head containing the stylus and also a different weight, generally by adjusting a wheel or knob at the back of the pickup arm. If these changes are brought into operation inadvertently by a user, a microgroove record can be irreparably damaged.

The players should be fitted with covers to protect them from dust and should be mounted on a rigid bench so that accidental bumping will not occur thus preventing damage caused by the stylus jumping across the phonodisc.

Descriptions of the types of facilities that may be developed in libraries but do not permit user access to the phonodisc collection are provided in an article by Barnett (4) describing the facilities in the Fisher Library of the University of Sydney and in a thesis on the University of Texas Audio Library presented by J. Hawkins. (5) C. W. Stone offers useful advice on planning audio facilities in libraries in his paper "Listening facilities in the library". (6)

In libraries where phonodiscs are made available on open access, damage to individual items must be accepted as a result which cannot be avoided.

For use in the library, machines for playing tapes and discs must be fitted with earphones. It will often be found that a headphone facility has to be specially fitted. It is common on tape recorders but is not often found on record players. It is essential that machines be fitted with volume control. Some smaller tape players have been noted which do not have this important facility.

REFERENCES

1. Roach, H. **Spoken records.** 3rd ed. Metuchen, N. J., Scarecrow, 1970.

2. See for example —
   Sunder, Mary Jane. 'Organization of Recorded Sound'. **Library Resources & Technical Services** v. 13 (1): 92-99, Winter 1969.

   Drake, H. 'Cataloging recordings'. **Illinois Libraries** v. 46: 145-52, February 1964.

   Phillips, D. 'Expandable classification scheme for phonorecord libraries'. **Library Resources and Technical Services** v. 13 (4): 511-515, Fall 1969.

   Carey, J. T. 'Visible index method of cataloging phonorecords'. **Library Resources & Technical Services** v. 13: 502-10, Fall 1969.

   Cox, C. T. 'Cataloging of records'. **Library Journal** v. 85: 4523-5, December 15, 1960.

   A summary of several classification schemes for record collections is given in Barnes C. 'Classification and cataloging of spoken records in academic libraries'. **College & Research Libraries** v. 28: 49-52, January 1967.

3. Riddle, J., S. Lewis and J. Macdonald. **Non-book Materials: The Organization of Integrated collections.** Preliminary edition. Ottawa, Canadian Library Association, 1970.

   Cataloguing instructions and examples for phonodiscs are given on pages 33 to 38 and for phonotapes on pages 39 and 40.

4. Barnett, D. 'Music recordings in Fisher library'. **Australian Library Journal** v. 14: 191-8, December 1965.

5. Hawkins, J. A. W. **University of Texas audio library** (unpublished M.L.S. Thesis). University of Texas, 1966.

6. Stone, C. W. 'Listening facilities in the library'. Library Equipment Institute, St. Louis, Missouri. 1964. **The library environment. Aspects of interior planning.** Chicago, American Library Association, 1965.

XVI

VIDEO RECORDINGS

Of all audiovisual media, video recording seems to be that which is in the greatest state of flux at present. **Non-book materials** does not include cataloguing rules for this medium because developments occurring at the time of publication precluded a detailed study.

Video tapes have been available for some years for the recording and play-back of programmes but their acceptance into the library for individual use has been hampered by the cost and relative complexity of equipment. Television in libraries has largely been restricted to transmission from a central control station to individual monitors permanently located in carrels.

The Launceston Teachers College has developed television facilities of this type. Video monitors installed in the audiovisual carrels in the library receive signals transmitted from a central control room. At the Tasmanian College of Advanced Education it seems likely that video signals will be transmitted from a central control to monitors located in carrels. It is intended to have a number of channels available for transmission.

A major problem associated with current video recording is the lack of compatibility between machines from different manufacturers. Thus a video recording made on brand 'X' machine cannot be replayed on brand 'Y' machine. In fact, head alignment variations may disallow acceptable reproduction on another brand 'X' machine even though it may be the same specific model. For this reason, groups of colleges which intend to develop co-operative schemes involving the exchange of video recordings of programmes should ensure that equipment selected by individual colleges within the group is compatible with that selected by all the others. There is great potential for country colleges to develop exchange schemes so that lecture programmes produced and recorded in one college can be used by other colleges as well thus making maximum use of the expertise and skill of lecturing staff.

Current developments make likely the availability in Australia very shortly of cartridged formats suitable for handling by individual users. Several manufacturers are working on pre-recorded video cassette systems involving players about the size of the average phonotape machine. An article in the December, 1970 issue of **American Libraries** (1) reports on a number of systems which were then available in the United States or which were to become available in the near future.

Morris (2) describes specific new equipment and new methods now available or soon to become available.

A report in **The Gramophone** (3) indicates that in addition to the regular open reel video tape recorders the following systems are being developed:

(a) Videocassettes. Video tape is contained in a cassette and threading problems are eliminated. Manufacturers developing this type of system include Philips, Sony and Grundig.

(b) Selectavision. This system developed by RCA employs a tape considerably less expensive than videotape. The tape is enclosed in a cassette.

(c) Electronic Video Recording (EVR). Fine grain film in cartridges is used as the recording medium. Columbia Broadcasting System is reported to be marketing pre-recorded materials to libraries in the United States.

(d) Video discs. Thin plastic foil discs are the recording medium. Development has been carried out as a joint effort by AEG-Telefunken and Teldec, a joint Telefunken and Decca company. Cost of discs is anticipated to be very low, in the range of existing long playing phono-discs.

In view of the imminent general availability of these new systems of video recording, libraries would be well advised to delay for the immediate future any developments planned for video systems.

Several colleges have developed television facilities. Among the more common brands of television equipment found in Australian educational institutions are Ampex, International Video Corporation (IVC), Philips, Shibaden, Sony, Akai and National. Details of manufacturers, distributors and consultants are included in the chapter, 'Manufacturers, distributors and sources of information'.

It should be noted that the danger of damage to videotapes is critical because of the importance of every section of the tape surface. Videotapes must be handled with care, avoiding contact with the recorded face. Edge damage (which may occur through careless storage in other than a vertical position) can affect replay. Dust, cigarette ash and smoke and other airborne particles are serious contributors to tape damage.

Although it is likely that most libraries will retain their videotapes on open reel in closed access because of susceptibility to damage and the need to have trained personnel to operate play-back equipment, video tapes should be catalogued and included in the library's catalogue.

When cataloguing videotapes the rules for cataloguing motion pictures provided in **Non-book materials** should be followed with the following amendments —

Media designation: Videotape.

Collation: Include also speed, tape width, reel size and brand and model of machine required for play-back.

Television teaching techniques — an introduction [3] by G. L. Klein and J. D. Hockley will be of interest to teaching and audiovisual staff engaged in television production and would be a worthwhile acquisition for the library wishing to develop interest among staff in this medium.

REFERENCES

1. 'Coming through your front door: prerecorded video cassettes'. **American Libraries** v. 1 (11): 1069-1073, December 1970.

2. Morris, L. P. 'Teleducation: networks for knowledge'. **Library Trends** v. 19 (4): 482-492, April 1971.

3. Borwick, J. 'See-and-hear-records'. **The Gramophone** v. 49: 502-503, September 1970.

4. Klein, G. L. and J. D. Hockley. **Television teaching techniques — an introduction.** Adelaide, Department of Education, Audio Visual Education Centre, 1970.

XVII

STUDY PRINTS, ART PRINTS, CHARTS, PICTURES, MAPS

The major graphic materials found in the non-book collections of libraries include study prints, art prints, charts, pictures and maps. Study prints are pictures with an accompanying text which makes the print of significance for study purposes. A comprehensive collection of art prints and maps is particularly important in colleges where art, geography, geology and associated subjects are taught. In a college with a teacher education programme, the development of a large range of charts, pictures and study prints is particularly important for the teacher-trainees engaged in practice teaching. Some of the largest collections of pictures in Australian college libraries are found in libraries attached to teachers' colleges.

Selection aids which may be of value to libraries engaged in the development of a collection of graphic materials include the following—

1. **How and where directory.** (1) This is particularly useful as a source directory for charts published by various industrial and commercial enterprises in Australia.

2. **UNESCO Catalogue of colour reproductions of paintings prior to 1860.** New York, Columbia University Press, 1964.

3. **UNESCO Catalogue of colour reproductions of paintings: 1860 to 1965.** New York, Columbia University Press, 1966. This catalogue and the one preceding it list colour reproductions of quality. Each entry includes information about the process used in painting, the printer, the publisher, the size and the price.

4. Bartran, M. **A guide to colour reproductions.** New York, Scarecrow, 1966. This is a very useful guide for libraries developing a collection of art prints and it contains over 8,500 titles of colour reproductions. The titles are listed under the alphabetically arranged names of the artists who produced the original works of art and details of dimensions, publisher and price are given for each entry.

5. **Australian Maps.** Canberra, National Library of Australia (Quarterly)

   The entries in this publication are compiled from material received in the National Library of Australia and it is intended that it will cover all atlases and sheet maps which are published in or which represent areas within the Commonwealth and its external territories. Maps of all types are included.

Among the many organisations from which graphic materials may be obtained are the following:—

1. Angus & Robertson (Publishers) Pty. Ltd., 221 George Street, Sydney. A large range of maps, particularly those published overseas, is available including Denoyer-Geppert and Bartholomew Maps.

2. The Department of National Development, Division of Mapping, Canberra, A.C.T. Catalogues of the maps published by the Department are available on request.

3. Educational Productions Ltd., East Ardsley, Wakefield, Yorkshire, U.K. This firm publishes a wide range of wall charts and study kits especially suitable for collections supporting teacher education courses.

Cataloguing rules for the cataloguing of graphic materials are given in **Non-book materials** and these should be followed.

It is recommended that graphic materials be organised in classified order to provide the user with a subject approach to the materials. Two of the largest collections of graphic materials inspected by the author were those at the Sydney Teachers' College and the Ballarat Teachers' College. At both libraries the materials (and these were chiefly charts, art prints and pictures) have been arranged in classified order and it was reported that this was working very satisfactorily.

Materials for which it is anticipated there will be heavy use, are normally prepared in such a manner that a degree of protection is afforded to them. Among methods used to protect graphic materials are the following:—

1. Lamination. General Binding Corporation Aust. Pty. Ltd., 24 Lyndhurst Street, Glebe, N.S.W. markets a machine which laminates a film of polyester and polyethylene to paper. This provides a transparent coating to the original material so that it will not crack, chip, peel or delaminate. While this is a relatively expensive method of preparation it does ensure a very high level of protection to materials.

2. Materials may be mounted on cardboard or heavy duty paper. While this offers excellent protection to pictures and charts and other graphic materials, it is a time-consuming process and the resulting items are difficult to transport when lent to users because of their ungainly size. The addition of the cardboard or heavy duty paper to the original increases greatly the amount of material to be stored.

3. The materials may be mounted on muslin. This is a difficult task and is certainly a job for a bindery.

4. Applying protective tape to the edges of materials. Max Wurcker Pty. Ltd., 23 Hardware Street, Melbourne, 3000, market the Admel edging machine. This machine applies a tough edging tape to the materials and items are protected from splits along the edge. This preparation has been used at the Ballarat Teachers' College for some years and the Librarian reports that it has provided excellent protection for materials which have been lent to teacher-trainees for practice teaching purposes.

5. The application of self-adhesive plastic sheeting to the surface of graphic materials. Lightweight plastic surface sheeting is available from Raeco Library Equipment Pty. Ltd., which, when applied to the surfaces of graphic materials, provides a very high level of protection.

Pictures, charts, art prints and maps do not lend themselves to interfiling with books and it will be found necessary to store them as a separate section in the collection. Perhaps the most satisfactory method of storage is that provided by standard type plan cabinets such as those manufactured and distributed by Brownbuilt Ltd., Duff Steel Industries Pty. Ltd., and Fileguard Co. (Australia) Pty. Ltd.

An alternative storage system is that manufactured by Vertiplan Pty. Ltd. In this system, items are hung vertically within the cabinet and are much more easy to browse through than those stored in plan cabinets. This system is in use at the Library of Launceston Teachers' College where it is reported to be working satisfactorily. There are other systems available also in which items are hung vertically. Vertical plan files take up less floor space than horizontal plan files and access to an individual map or chart is much easier. For libraries with small collections of this material, newspaper "sticks" like those marketed by library suppliers as S & M Supply Company Pty. Ltd. may be used and hung in metal frames which stand on the floor.

If materials are mounted on cardboard or heavy duty paper it will probably be found necessary to provide custom-built storage units for the materials as the added thickness of each item will make it impracticable to store them in horizontal plan files.

For circulation purposes, cardboard cylinders should be provided for materials which are not mounted on cardboard, and cardboard folders with carrying handles attached should be provided for users borrowing materials mounted on cardboard. The provision of cylinders and folders will not only be appreciated by students borrowing materials, but will also help to protect the materials from damage.

REFERENCES

1. **How and where directory: an index to sources of information** 2nd ed. Sydney, Encyclopaedia Britannica for the School Library Association of New South Wales, 1969.

XVIII

DIORAMAS, MODELS AND REALIA

A diorama is a scene reproduced in three dimensions by placing objects, figures and locative items in front of a representational background. Realia are actual objects or specimens included in the library's collection.

Cataloguing rules for dioramas, realia and models are provided in **Non-book materials** (1), and should be followed.

While it is normal practice in most educational institutions to store models and realia in the teaching departments in which they are used, these materials are suitable for inclusion in the audiovisual collection of the library and if displayed on open shelves in a prominent position will create a lot of interest. If possible, these materials should be shelved with the books, perhaps on the bottom shelves of the book-stacks.

Two Australian sources of supply of this type of material are —

1. L. & S. Equipment Pty. Ltd., 76/84 Bay St., Broadway, Sydney, 2077. Materials produced by a range of manufacturers are available.

2. Angus & Robertson Pty. Ltd., 221 George St., Sydney, 2000. A wide range of models, particularly in geography and the earth sciences produced by Denoyer-Geppert is available.

REFERENCES

1. Riddle, J., S. Lewis and J. Macdonald. **Non-book Materials: The Organization of integrated collections.** Preliminary edition. Ottawa, Canadian Library Association, 1970. (p. 41-44).

XIX

GAMES, LABORATORY KITS AND KITS

Kits are combinations of two or more media designed to be used as a unit. Laboratory kits are boxed co-ordinated materials designed to promote specific learning experiences. Games are sets of materials designed for play or competition. Those included in the collection will normally be associated with the teaching of specific skills. Some games are available which simulate real situations. Games are included in this section because they frequently consist of a number of items and provide many of the same problems to the librarian as do kits.

Among the more common kits currently available for inclusion in the non-book collection are sound filmstrips consisting of a filmstrip accompanied by a sound source such as a phonodisc or a phonotape and sound recordings accompanying books.

Items in a kit should always be kept as a unit. They should be catalogued, classified and stored as such. Separation of items occurring in a kit destroys the intention for which the kit was created. Cataloguing rules for games, kits and laboratory kits are provided in **Non-book materials** (1) and these should be followed. Librarians however, may choose to disregard the instruction given in the rules for cataloguing games to use the term 'various pieces' if there are more than 10 pieces. It would seem to be advantageous for inventory purposes to include the number of pieces comprising a game. Both games and kits are normally supplied with their own containers. In the event of items being received which do not have a satisfactory container, stoutly made boxes such as those available from S. & M. Supply Co. Pty. Ltd, should be used.

A list of the items comprising the kit or game should be attached to the lid of its container for easy checking at stock-taking time and when items are returned from loan.

Because of the ungainly size of many of the containers, storage difficulties may be experienced when attempts are made to interfile games and kits with the books. A satisfactory compromise which has been observed in some libraries is to shelve games and kits and other materials of a similar nature on the bottom shelves of the book stacks. If this is not possible, they should be arranged in classified order in open access on shelves placed in a prominent position in the library.

Games and kits are available from a number of commercial and industrial organizations. Science Research Associates Pty. Ltd. produce a large range of materials in laboratory kit form for use at all levels of instruction.

REFERENCES

1. Riddle, J., S. Lewis and J. Macdonald. **Non-book Materials: The Organization of Integrated collections.** Preliminary edition. Ottawa, Canadian Library Association, 1970. Pages 45-49.

XX

SELLING THE SERVICE

In the preceding sections of this work, interest has centred on the development and organization of a collection of non-book materials and the administration of audiovisual services in the college. Having developed both a collection and services, the librarian must sell them.

The problem confronting the librarian is that of making students and faculty aware of the existence of the collection and services available and the value these may have for them in teaching and learning. Dupuy (1) speaks of the "missionary" effort needed to encourage doubtful faculty members to make use of the opportunities presented by non-book media. An active programme of publicising the audiovisual facilities available is necessary not only to make known their existence but also to encourage their use.

Faculty may show reluctance to make use of audiovisual materials in their class teaching and to encourage students to use it in their independent study. In their 1965 report, the Committee established in Great Britain to study audiovisual aids in higher scientific education, suggested a number of reasons academics have tended to be suspicious of employing audiovisual materials and equipment in their teaching. "He may have been so busy and pre-occupied with books and with learning that he has been denied any real opportunity to assess and enjoy them. He may fear that they intervene, as books do not, in the interplay between personalities. He may even believe that they are less accurate than printed or spoken words as means of communication. He may be convinced that their use demands a technical skill he does not possess. He may doubt that there is any aid either to learning or to teaching; in short he will teach as his teachers taught him and his students will learn as he did." (2) Kemp (3) supports the Committee's views. Pringle suggests a number of ways by which faculty indifference to audiovisual media can be explained. "The lack of co-ordination, the difficulty of scheduling equipment, the problems connected with booking materials, classrooms unsuitable for the utilization of AV materials, lack of knowledge as to the availability and potentialities of AV materials, and lack of time to assemble and make full use of them are among some of the factors that have been deterrents". (4)

The initial task of the library determined to encourage interest in the audiovisual services offered is one of establishing good public relations. In the college where the audiovisual services department and the library operate within the single organization of the resource materials centre, the audiovisual librarian and the co-ordinator of audiovisual services can operate as a team going into the teaching departments of the college and speaking with academic staff. The task is "to sell" audiovisual services. Discussions may be held with individual academics on the range of materials available in the library suitable for their particular teaching needs, on the services offered and on the selection aids and bibliographies held by the library from which an appreciation of the range of suitable materials available may

be gained. In offering services to staff, it is important not to offer any which the library will not be able to fulfil when they are requested. Discussions with staff should also include attempts to ascertain services which staff would like introduced.

A handbook for faculty use should be prepared and regularly revised describing all aspects of the audiovisual programme. Sections should be included giving information on:—

(1) selection aids available and procedures to be observed when requesting the acquisition of materials.

(2) equipment available, instructions for operation, and the procedures established to arrange its use outside the resource materials centre.

(3) circulation policy for audiovisual materials and equipment. (This is essential if faculty wish to prescribe student use of materials for assignment and study purposes.)

(4) facilities available for the production of materials.

(5) materials available. (This may take the form of a catalogue with brief entries for items. Where this is not possible an indication of the range of materials in the collection should be given.)

(6) staff of the resource materials centre with an indication of the responsibilities of each.

The Instructional Resources Center of the College of DuPage at Glen Ellyn, Illinois has produced an excellent example of the type of handbook which would be of considerable value to faculty and which would undoubtedly help to sell the audiovisual programme to them. Entitled **Media Mandex** (5), it incorporates a staff list, a section on equipment giving illustrations of the various pieces available and instructions for use, a subject index to materials available and an alphabetical index of materials arranged by media. It is interesting to note that periodicals and reference books are included in the indexes as well as non-book materials.

The faculty handbook should be supplemented by an accession list and a news-sheet published at regular intervals. It is possible to combine these into a single publication. The accession list serves to bring to the notice of staff materials acquired by the library, while the news-sheet provides information on matters such as developments in the audiovisual programme, new equipment purchased and additions and changes to the services offered. Entries in accession lists should be annotated where the title doesn't provide sufficient indication of the contents.

In addition to a faculty handbook, a similar publication should be prepared for student use. This may be included in the library handbook produced for student use. The various types of media should be

enumerated and instructions on the operation of equipment necessary to use the materials should be provided. Details of circulation policy and services offered to students should be included.

As well as faculty and student handbooks, catalogues may be published in booklet form for materials in specific formats, for example, a catalogue of loop films. Such catalogues will be of benefit for academic staff whose first concern in selecting materials for instructional purposes may be format. They will also be of value to users who wish to know the library's holdings in a particular medium. Entries should be suitably annotated to allow meaningful selection.

To encourage faculty interest in the audiovisual programme, the audiovisual librarian should maintain a comprehensive collection of manufacturers' catalogues, selection aids and bibliographies and encourage faculty to use them to select for review and purchase materials they may consider would be of value to them in their teaching programme.

Other promotional activities may include displays of materials and equipment in the library and in prominent locations throughout the campus and the use of notice boards to display posters, brochures and information notices.

The provision of books which give guidelines to teachers in the use of materials and equipment is advisable. The following are good examples of this type of book —

Carr, W. D. **A guide for audiovisual and newer media.** Oklahoma City, Oklahoma State Department of Education, 1970.

Romiszowski, A. J. **The selection and use of teaching aids.** London, International Text Book Co., 1968.

Audiovisual aids in higher scientific education. Report of the Committee appointed by the University Grants Committee, the Department of Education and Science, and the Scottish Education Department. London, H.M.S.O., 1965.

Brown, J. W., R. B. Lewis and F. F. Harcleroad. **AV instruction: media and methods.** 3rd edition. New York, McGraw-Hill, 1969.

Taylor, E. A. **A manual of visual presentation in education and training.** Oxford, Pergamon, 1966.

Pula, F. J. **Application and operation of audiovisual equipment in education.** New York, Wiley, 1968.

Seminars on the use of audiovisual materials and equipment in teaching and student study may be conducted by library and audiovisual services staff for faculty members. In these seminars an emphasis should be placed on practical work including instruction in

the use of equipment likely to be employed by staff. Elsewhere the importance of an education unit within a resource materials centre has been discussed. Staff of such a unit would take an active part in the conduct of seminars for faculty members and in advising them of teaching strategies they might employ which involve the use of audiovisual materials and equipment.

Many audiovisual materials require equipment for class use. For the busy teacher, arranging to have equipment ready for class will be an impossible task. The resource materials centre must provide the busy lecturer with a complete service, not only offering materials for use but also producing them when requested and setting up equipment in classrooms for his use. Operators should be available when required. Romiszowski states that "systematic planning is required to ensure that materials are ready and equipment is set up in the right place at the right time. The organizational problems involved often transform the teaching aid into a teacher's problem. It becomes just too much trouble to incorporate it into the classroom presentation". (6) Procedures must be established in the resource materials centre to ensure that the lecturer wishing to make use of audiovisual equipment in class experiences the fewest possible organizational problems. The procedures should be made known to teaching staff and they should be encouraged to make use of them.

A copying machine capable of producing overhead projector transparencies from printed sources and illustrations may be installed in the library for use by lecturing staff. As overhead projectors become more common in classrooms, this facility will be of benefit to staff who wish to prepare a transparency for class use from a source located in the library. This service is offered in at least one college of advanced education library where it has proved to be very popular with academic staff. Machines are also available which will make a dual purpose spirit duplicating master and overhead transparency. While the provision of these machines is not directly concerned with promoting the use of the non-book collection, it serves to create interest in the use of audiovisual techniques in teaching and thus indirectly promotes use of materials in the collection.

Where possible, students may be allowed to make limited use of media production facilities in the resource materials centre. They may be encouraged to make tape recordings, films and 35 mm transparencies and to use television production facilities. At one Australian college students present a daily newscast using the closed-circuit television facilities of the audiovisual services department. Permitting such activities serves to create among students an awareness of audiovisual media as learning and information resources. Ramey supports student involvement in the production of software and suggests it is not only instructive but also a "very apt means of focusing the attention of students who may not be challenged by other types of presentation". (7)

Some students will be deterred from using audiovisual materials because they do not have knowledge of the operation of the necessary equipment. For this reason, instruction in the use of audiovisual equipment should be provided for students and this may be included in studies in library practice where formal courses are conducted or it may be given on an individual basis to students who request it. Formal instruction given to all students would seem to be the most satisfactory as many students will be reluctant to request instruction if it is offered on an informal basis.

Signs should be prepared for display in the library inviting use of audiovisual facilities, indicating the location of materials not shelved with the books, and explaining the use of equipment.

It must not be assumed at any time that because the resource materials centre has developed an audiovisual collection and offers various audiovisual services to students and staff, use will be made of them automatically. Library staff must undertake a vigorous programme of encouraging use. Collections and services which remain unused or for which there is little demand are a poor investment of scarce financial resources.

REFERENCES

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2. **Audio-visual aids in higher scientific education.** Report of the Committee appointed by the University Grants Committee, the Department of Education and Science, the Scottish Education Department. London, H.M.S.O., 1965. (p. 2).

3. Kemp, J. E. **Planning and producing audiovisual materials.** 2nd ed. San Francisco, Chandler, 1968. (p. 3).

4. Pringle, E. A. 'Audiovisual materials and college objectives'. **Choice** v. 3: 1107-9, February 1967.

5. College of Du Page. Instructional Resources Center. **Media Mandex.** Glen Ellyn, Illinois, 1970.

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XXI

MANUFACTURERS, DISTRIBUTORS AND SOURCES OF INFORMATION

During the preparation of this work, many organizations were contacted or brought to my notice which are involved in various ways with non-book materials. The following is a list of some of these organizations. A number of those listed are manufacturers, others are distributors, while some may be regarded as sources of information on particular aspects of audiovisual media. The list is by no means a complete directory. The production of such a directory is a major task in itself. The list is included to provide a starting point for librarians and audiovisual co-ordinators involved in the development of non-book collections and audiovisual services. Annotations are provided for all entries as guides to those services which are offered by the organizations and which may be of interest to librarians. In some instances other services as well as those indicated may be available. These have not been noted either because they were not relevant to the task of developing audiovisual collections and services or because sufficient information was not available.

AA Hospital Equipment Co.,
(subsidiary of Accounting Aids Pty. Ltd.)
210 Australia Street,
NEWTOWN, N.S.W. 2042.

Manufacturers of filing facilities for 35 mm slides and negatives.

AWA-Rediffusion

(represented in each State by Amalgamated Wireless Australia) Large scale video distribution systems.

Akai Australia Pty. Ltd.

(agents in capital cities). Distributors of Akai audio and video equipment.

Angus & Robertson Pty. Ltd.,
221 George Street,
SYDNEY, N.S.W. 2000.

Distributors of maps including those published by Bartholomew, Denoyer-Geppert.
Distributors for Spoken Arts recordings. A number of films, loop films, audio-filmstrips and overhead transparencies prepared for Australian educational purposes is sold. A catalogue is available.

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Audio-Visual Education Centre, Department of Education, 221 Wakefield Street, ADELAIDE, S.A. 5000.	Their Audio-visual Bulletins are available on a range of topics including — The tape recorder (number 1) Care and use of 16 mm motion picture projectors (number 3) The overhead projector (number 8) Selection of media equipment (number 12)
Amalgamated Wireless Australia Ltd., (offices in capital cities)	Manufacturers and distributors of television and audio equipment.
Australian Broadcasting Commission, 145-149 Elizabeth Street, SYDNEY, N.S.W. 2000.	Catalogue of films produced by or for the A.B.C. is available. Many of these films are well suited to college use.
Australian Video Engineering, 7 The Crescent, ANNANDALE, N.S.W. 2038.	Suppliers of electronic hardware including broadcast standard audio and video equipment. Video system design and installation.
B.B.C. Television Enterprises, 177 Elizabeth Street, SYDNEY, N.S.W. 2000.	Catalogue of BBC television programmes which can be supplied on 16 mm films for optical screening is available. Many of the films listed are well suited to college use.
Bell and Howell Micro-photo Division, Old Mansfield Road, WOOSTER, OHIO, 44691, U.S.A.	Publishers of microreproductions.
A. Bonacker K.G. 282 Bremen-Lesum, Posfach 113, Federal Republic of Germany.	Manufacturers of "Abodia" 35 mm slide storage cabinets. Information available on request.
British Universities Film Council, Royalty House, 72 Dean Street, LONDON.	Publishes **Films for Universities** a new edition of which will be available shortly.
Brownbuilt Limited, (offices in capital cities)	Manufacturers of steel storage cabinets of various types.

C.B.S. Enterprises Pty. Ltd., Colman House, Berry & Walker Sts., NORTH SYDNEY, N.S.W. 2060.	Distributes films produced by BFA Division of CBS Enterprises. A catalogue is available on request.
Clifford Audio-Visual, 49 Market Street, SYDNEY, N.S.W. 2000.	Distributors of a large range of materials and equipment including loop films, Technicolor equipment, Beseler overhead projectors, Du Kane equipment for cassette sound filmstrips, Rank Aldis 16 mm projectors and slide/filmstrip projectors and Barclay rear projection screens. Suppliers of materials for the preparation and permanent fixing of overhead transparencies.
Crosby Sensitizing, 31-49 Queens Bridge Street, SOUTH MELBOURNE, VIC. 3205.	Overhead transparencies on scientific and engineering subjects suitable for college level use.
Data Card Australia Pty. Ltd., 12 Chippen Street, CHIPPENDALE, N.S.W. 2008.	Distributors for Memorex video and audio recording tapes.
Department of National Development, Division of National Mapping, CANBERRA, A.C.T. 2600.	Publishes several series of maps. Catalogues are available on request.
Doubleday and Company, (Australian distributors, Feffer and Simons Inc. 14 Mars Road, LANE COVE, N.S.W. 2066)	Materials including loop films, filmstrips and transparencies produced on a range of subjects. Catalogue available on request.
Duff Steel Industries (N.S.W.) Pty. Ltd., Flinders Street, PORT KEMBLA, N.S.W. 2505.	Manufacturers of library furniture including a range of storage units for audiovisual materials.
Ealing Scientific (Australia) Pty. Ltd., 23 Chandos Street, CROWS NEST, N.S.W. 2065.	Catalogues of materials produced by Ealing Films are available. The range of loop films suitable for college use is extensive.

Eastman Kodak Company, Rochester, NEW YORK, 14650 U.S.A.	A range of publications produced providing practical guidance on audiovisual media e.g. **Planning and producing visual aids, Audiovisual projection.** These publications are available on request from Kodak (Australasia) Pty. Ltd.
Educational Media Australia, 201 Park Street, SOUTH MELBOURNE, VIC. 3205.	Markets materials from a range of overseas producers including: Macmillan and ICEM Film-loops, National Film Board of Canada, Visual Publications. Large range of 35 mm slides including some produced by Educational Media Australia for Australian situations.
Educational Productions Ltd., East Ardsley, Wakefield, YORKSHIRE, U.K.	Materials, including wall charts and study kits, produced on a wide range of subjects. Catalogues available on request.
Encyclopaedia Britannica (Educational Division), 300 Castlereagh Street, SYDNEY, N.S.W. 2000.	Materials, including films, filmstrips and kits, on a range of subjects, some suitable for college level use.
The Federation of Victorian Film Societies, c/- Hon. Secretary, 4 Stanley Grove, CANTERBURY, VIC. 3126.	A range of publications of interest to libraries with film collections. Their **Index of 16 mm film libraries** is an excellent guide to film libraries in Australia.
Fileguard Co. (Australia) Pty. Ltd., 1340-1344 North Road, HUNTINGDALE, VIC. 3166.	Suppliers of a range of storage units for non-book materials including slides, filmstrips, pictures and maps.
G.E.C. — Elliott Automation Pty. Ltd., (offices in all States)	Distributors of National video equipment.
General Binding Corporation (Australia) Pty. Ltd. 24 Lyndhurst Street, GLEBE, N.S.W. 2037.	Manufacturers and distributors of lamination equipment and supplies.

General Microfilm Company, 100 Inman Street, CAMBRIDGE, MASS. 02139.	Microreproductions.
Goldring Sales & Service Pty. Ltd., (represented in all States)	Distributors of Goldring, Grundig, Sharp, Aiwa, Lanco, B.S.R. equipment for sound recording and reproduction.
Simon Gray Pty. Ltd., (represented in all States)	Distributors of electronic equipment including Ampex, Tandberg and Wharfedale.
Graphaid Products, Box 794 G.P.O. SYDNEY, N.S.W. 2001.	Manufacturers and suppliers of audiovisual materials including working models for overhead projectors and 35 mm slides.
Rudolph Gunz Pty. Ltd., (Offices in capital cities)	Distributors of 'Ennascop' opaque projectors and other photographic equipment.
Haco Commerce Pty. Ltd., (Offices in all capital cities)	Distributors of National Audio-equipment.
John Hadland Australia) Pty. Ltd., 28 Chester Street, OAKLEIGH, VIC. 3166.	Distributors of Paul Plus projection equipment including episcopes and overhead projectors.
Hanimex Pty. Ltd., Old Pittwater Road, BROOKVALE, N.S.W. 2100.	Range of projection equipment for slides, filmstrips, 16 mm films. Hanimette 35 mm slide and filmstrip projector, specially suitable for use in study carrels. Markets "Crown" range of tape recorders and players including Hanimex Syncro-corder which operates synchronously with a slide projector. Agents for Siemens and Halske Aktiengeselschft projection equipment and Fuji micro readers.
Hawthorn Trading Company, 1 Waratah Avenue, BURWOOD, VICTORIA. 3125.	Distributors for a number of producers of audio-visual materials including — Armand Colin - Veronese, Paris and Eye-gate instructional materials.

Holt, Rinehart and Winston (Aust.) Pty. Ltd., 79 Whiting Street, ARTARMON, N.S.W. 2064.	Wide range of audiovisual materials available.
Instrol Hi-Fi Centre, 91A York Street, SYDNEY, N.S.W. 2000.	Suppliers of a range of audio equipment.
Inter Documentation Company A.G. Poststrasse 9 ZUG, SWITZERLAND.	Microreproductions.
Jacoby Mitchell Pty. Ltd. (Offices in capital cities)	Suppliers of audio and video equipment. Australian agents for Sony and Kenwood equipment.
Jupiter Recordings, 140 Kensington Church Street, LONDON, W.8	A range of recordings of poetry, prose and music. Australian agents — L. & S. Educational Equipment Pty. Ltd., (q.v.)
Kodak (Australasia) Pty. Ltd., (Office in each capital city)	A range of publications is available on request providing information on a variety of visual media, e.g. **Movies with a purpose, Single concept films.** Manufacturers and distributors of an extensive range of photographic, micrographic, cine equipment and supplies.
L. & S. Educational Equipment Pty. Ltd., 76-84 Bay Street, Broadway, SYDNEY, N.S.W. 2007. and 259 East Boundary Road, East Bentleigh, VICTORIA, 3165.	Agents for a range of publishers of audiovisual materials including: Common Ground Filmstrips Hulton Filmstrips Imperial Film Company, Inc. Gunter Hermann Mathematical Models Hubbard Scientific Company Society for Visual Education, Inc. Jupiter recordings Demos and Jupiter overhead projectors.
McGraw-Hill Book Company Australia Pty. Ltd., 231 Pacific Highway, NORTH SYDNEY, N.S.W. 2060.	Large range of educational films, loop films, filmstrips and slides suitable for college use available for purchase.

Macmillan Co. (Aust.) 107 Moray Street, SOUTH MELBOURNE, VIC. 3205.	Large range of loop films available manufactured by the parent company in Great Britain.
Micro Methods Ltd., East Ardsley, Wakefield, YORKSHIRE, ENGLAND.	Microreproductions
Minnesota Mining and Manufacturing (Australia) Pty. Ltd., (3M Company) (Offices in each capital city)	Catalogue available of overhead transparencies prepared on a range of subjects. Manufacturers of audiovisual equipment and supplies including overhead projectors, microfilm reader-printers, and video-tapes.
Movitex and Movigraph Systems, 142 Wickham Street, Fortitude Valley, QUEENSLAND. 4006.	Manufacturers and suppliers of visual demonstration media.
NCR/Microcard Editions, 365 South Oak Street, West Salem, WISCONSIN, U.S.A.	Microreproductions.
The National Library of Australia, National Library Card Service, CANBERRA CITY, A.C.T. 2601.	Catalogue cards for non-book materials available for materials represented in the file of Library of Congress cards deposited with the National Library.
New South Wales Film Council, 55 Market Street, SYDNEY, N.S.W. 2000.	Publishes **Film Libraries In New South Wales,** a useful publication for libraries developing a film borrowing system. (Note: State film libraries do not normally lend to interstate borrowers.)
The Open University, Walton Hall, Walton, Bletchley, BUCKINGHAMSHIRE, U.K.	The University has for sale tape recordings and films of lecture series conducted by the University.
W. & F. Pascoe Pty. Ltd., 2a Glen Street, MILSON'S POINT, N.S.W. 2061.	Microreproductions of Australian publications particularly newspapers. Catalogue available on request.

Philips Industries Ltd. (Offices in all capital cities)	Manufacturers of an extensive range of electronic, video and audio recording and projection equipment.
Phonogram Recordings Pty. Ltd., 11-13 West Terrace, ADELAIDE, SOUTH AUSTRALIA, 5000.	Phonodiscs and phonotapes. Distributors for Caedmon records.
Pyrox Ltd., (Offices in all mainland capitals)	Distributors of equipment including Leitz Wetzlar, Bauer and Kalart Victor projection equipment.
Raeco Library Equipment Pty. Ltd., 711 Canterbury Road, BELMORE, N.S.W. 2192.	Manufacturers and distributors of library equipment and supplies including some for use with audiovisual materials.
Readex Microprint Corporation 5 Union Square, NEW YORK, N.Y. 10003, U.S.A.	Microreproductions
Rigby Limited, 30 North Terrace, KENT TOWN, S.A. 5067.	Australian distributors of materials produced by Longman. These include tapes, records, filmstrips, loop films and slides in a wide range of subjects.
S. & M. Supply Company Pty. Ltd., (Offices in Sydney, Melbourne, Brisbane and Adelaide.)	Suppliers of library requirements including audiovisual storage units. A division of the firm handles audiovisual equipment.
Sanyo Sales Pty. Ltd., (Offices in capital cities)	Suppliers of audio equipment.
Scala Record Import Co. Pty. Ltd., Alderson Buildings, 504 Pacific Highway, ST. LEONARD'S, N.S.W. 2065.	Australian distributors of Argo records.
Science Research Associates Pty. Ltd., 81-87 Ryedale Road, WEST RYDE, N.S.W. 2114.	S.R.A. range of materials including laboratory kits suitable for college level use.

Scientific Instrument and Optical Sales, 70 Kelvin Grove Road, Normanby, BRISBANE, QLD. 4059.	Queensland distributors for Meopta episcopes, Orion overhead projectors and Enbeeco micro-slide projectors.
Sixteen Millimetre Australia Pty. Ltd., (Offices in capital cities)	Markets the Bell and Howell range of equipment. Films available on hire—catalogue forwarded on request. Suppliers of Shibaden television equipment.
Steelbilt Company, 212 Young Street, WATERLOO, N.S.W. 2017.	Manufacture steel library furniture including shelving and plan files.
Swift and Bleakley Pty. Ltd., 149 Milton Street, ASHFIELD N.S.W. 2131.	Motion-picture and television equipment especially lighting equipment.
Tabula Educational and Scientific Aids (Offices in all mainland capitals)	Suppliers of teaching aids including overhead projectors and accessories.
Technicolor, Commercial and Educational Division, 1300 Frawley Drive, COSTA MESA. CALIFORNIA 92627.	Manufacturers of audiovisual equipment including a loop film projector (available from Clifford Audio-Visual q.v.). Their directory **Silent film loop source directory** is available on request. The directory lists films prepared for use in the projector manufactured by Technicolor.
3M IM/Press, Box 720 Times Square Station, NEW YORK, N.Y. 10036, U.S.A.	Microreproductions.
University Microfilms, 300 North Zeeb Road, ANN ARBOR, MICHIGAN, 48106, U.S.A.	Microreproductions of serials and out-of-print monographs. Catalogues are available.
University of Papua and New Guinea, Educational Materials Centre, Boroko, TERRITORY OF PAPUA AND NEW GUINEA.	Booklets prepared for the evaluation of educational materials. Available from University of Papua and New Guinea Bookshop.

University of Queensland Press, St. Lucia, BRISBANE, QLD. 4067.	Microfilm editions of some historically important publications and doctoral theses.
Vertiplan Pty. Ltd., P.O. Box 336, CLAYTON, VIC. 3168.	Manufacturers of vertiplan filing systems suitable for filing maps, charts and pictures.
Western Publishing Company, Inc., School & Library Department, 850 Third Avenue, NEW YORK, N.Y. 10022, U.S.A.	Producers of slides on scientific subjects. Catalogue available.
Bruce Window Electronics Pty. Ltd., 139 Stanley Street, SOUTH BRISBANE, QLD. 4101.	Installation and modification of audio and video equipment. Suppliers of all major brands of audio and video equipment. High-speed tape duplication service. Production facilities for sound and video recording. Video tape dubbing service available. Video system design and installation.
Max Wurcker Pty. Ltd., 23 Hardware Street, MELBOURNE, VIC. 3001.	Suppliers of Admel edging machine for pictures, charts etc.

XXII

SELECTED AND ANNOTATED BIBLIOGRAPHY

Items for inclusion in this bibliography have been selected for their relevance to the needs of those developing non-book collections and audiovisual services principally in colleges of advanced education. For this reason many of those books and articles which were specifically oriented towards primary and secondary school situations have been omitted. Annotations have not normally been given for items which are sufficiently described in the text.

'ARL-USOE micro-film study pegs library use problems'. **Library Journal.** v. 94: 3394-5, October 1, 1969.

Very brief summary of the major problems experienced by libraries in dealing with microforms.

'Aids for use in cataloging and classifying audio-visual materials'. **Library Resources and Technical Services.** v. 1 (4): 189-197, 1957.

An excellent bibliography of the major aids for cataloguing and classifying audiovisual materials.

American Association of School Librarians. **Policies and procedures for selection of instructional materials.** Chicago, 1970.

A guide for developing a selection policy.

American Library Association. **Anglo-American Cataloging Rules: North American Text.** Chicago, A.L.A. 1967.

American Library Association. American Assoc. of School Librarians, and National Education Association. Dept. of Audio-Visual Instruction. **Standards for school media programs.** 1969.

Although prepared principally for school libraries many sections are pertinent to the college library.

Association of College and Research Libraries. Audio-Visual Committee. **Guidelines for Audio-Visual Services in Academic Libraries.** Chicago, 1968.

Essential reading.

Audio-visual aids in higher scientific education. Report of the Committee appointed by the University Grants Committee, the Department of Education and Science, the Scottish Education Department. London, H.M.S.O., 1965.

A comprehensive report on the use of audiovisual materials and equipment in higher education.

Audio-Visual Australia. 333 Flinders Lane, Melbourne, (three per annum).

The Audio-visual equipment directory, Fairfax, Virginia, National Audio-Visual Association. (Annual).

Audio-visual instruction, an administrative handbook. Jefferson City, Missouri State Dept. of Education. 1961.

A comprehensive treatment of the development of an audiovisual programme. While oriented towards primary and secondary schools, it is of considerable interest for college librarians and administrators. Sections are included on personnel, budgeting, selection and use of audiovisual materials and equipment and evaluation of audiovisual services.

Audio Visual Market Place. New York, R. R. Bowker (Annual).

Australian Films. Canberra, National Library of Australia, Film Division (Monthly).

(Supplements **Australian Films. A catalogue of scientific, educational and cultural films, 1940 to 1958).**

Australian Films. A catalogue of scientific, educational and cultural films, 1940 to 1958. Canberra, National Library of Australia, Film Division, 1959.

(Supplemented by **Australian Films).**

Australian photography photodirectory. Globe Publishing Co., 321 Pitt Street, Sydney. (Annual).

A directory of most photographic materials and equipment marketed in Australia. Copiously illustrated.

Badten, Jean and Nancy Motomatzu. 'Commercial media cataloging — What's holding us up?' **Library Journal** v. 93: 4352-4353, November 1968.

Reasons given for the failure of commercial cataloguing firms in the U.S. to offer a comprehensive cataloguing service for audiovisual materials.

Barnes, C. 'Classification and cataloging of spoken records in academic libraries'. **College and Research Libraries** v. 28: 49-52, January 1967.

Describes some of the classification systems used and discusses problems associated with the cataloguing of spoken records.

Barnett, D. 'Music recordings in Fisher library'. **Australian Library Journal** v. 14: 191-8, December 1965.

A detailed description of the facilities provided in the Fisher Library of the University of Sydney for music listening and of the organization of the collection of recorded music.

Bartran, M. **A guide to colour reproductions.** New York, Scarecrow, 1966.

Over 8500 titles of colour reproductions listed.

Bergeson, C. O. 'Relationship of library science and A.V. instruction'. **Audiovisual Instruction** v. 12: 100-103, February 1967.

Interesting discussion on the relationship between the library and the audiovisual instruction department. The roles of librarian and audiovisual specialist are explored.

Black, J. 'British universities since the Brynmor Jones Report'. **Journal of Educational Technology** v. 1 (1): 9-15, January 1970.

Reports on developments since the report on **Audio-Visual Aids in Higher Scientific Education.**

Boddy, I. M. **The relationship between librarians and audio-visual specialists in colleges and universities and the role of each in the academic process.** (Unpublished Ph. D. Thesis). Ohio State University, 1965.

Report of a survey conducted in a number of colleges and universities in the United States to determine patterns in the relationships between the library and audiovisual services.

Borwick, J. 'See-and-hear records'. **The Gramophone** v. 49: 502-503, September 1970.

A summary of current developments in video recording.

British National Film Catalogue. London, British Industrial and Scientific Film Association. (bi-monthly with annual cumulation).

Brown, J. W., R. B. Lewis and F. F. Harcleroad. **A.V. instruction media and methods** 3rd ed. New York, McGraw, 1969.

Explains how various audiovisual materials may be used in teaching. Very useful for teaching staff.

Brown, James W. and J. W. Thornton. **New media in higher education.** Washington, D.C. Association for Higher Education and National Education Association. Department of Audiovisual Instruction. 1963.

An essential text.

Brubaker, M. J. 'The A & P of A.V. Materials'. **Illinois Libraries** v. 49: 129-40, February 1967.

Results of a survey on the methods of acquisitioning and processing of audiovisual materials in a number of U.S. libraries.

Buley, Hilton C. 'Concurrent session on planning instructional media facilities. Multi-media for instruction'. **American Association of Colleges for Teacher Education Yearbook** v. 18: 77-84, 1965.

Detailed description of multi-media facilities at Southern Connecticut State College.

Burgis, G. C. 'Contemporary university library: learning resource technology and techniques'. **Canadian Library Journal** v. 27: 24-8, January 1970.

Discussion of the effect on university libraries of the new media.

Calhoun, J. M. 'Preservation of motion-picture film'. **American Archivist** v. 30: 517-25, July 1967.

Problems associated with the preservation of film are discussed and suggestions made for preservation. A bibliography of nineteen items on the subject is provided.

Carey, J. T. 'Visible index method of cataloging phonorecords'. **Library Resources and Technical Services** v. 13: 502-10, Fall 1969.

The phonorecord cataloguing system of the Springfield (Mass.) City Library is discussed.

Carr, William D. **A guide for audiovisual and newer media.** Oklahoma City, Oklahoma State Department of Education, 1970.

Designed to aid teachers in the use of audiovisual media. Equipment used in a wide range of media is discussed and techniques for use outlined.

Carson, D. M. 'Cataloging nonbook materials'. **Wilson Library Bulletin** v. 39: 562-564, March 1965.

The main requirements for cataloguing items of non-book materials are discussed.

Christensen, R. M. 'Junior college library as an audio-visual centre'. **College and Research Libraries** v. 26: 121-8, March 1965.

A general article which includes sections on the centralization of college audiovisual facilities, staff requirements, buildings, acquisition and storage practices.

Church, J. G. **Administration of instructional materials organizations.** Belmont, California, Fearon, 1970

Sections on planning and administration of instructional materials centres are included as well as criteria for evaluation of centres.

Clugston, Katharine, W. 'Anglo-American Cataloging Rules: Film Cataloging at the Library of Congress'. **Library Resources and Technical Services** v. 13 (1): 34-41, Winter 1969.

Outlines the development of film cataloguing at the Library of Congress and compares the Anglo American Cataloguing Rules and those rules developed by DAVI.

College of Du Page. Instructional Resources Center. **Media Mandex.** Glen Ellyn, Illinois, 1970.

'Coming through your front door: prerecorded video cassettes'. **American Libraries** v. 1 (11): 1069-1073, December 1970.

A summary of current developments in video recording.

'Commercial Media Cataloging — What's Around?' An S L J Survey of Available Services, their Range of Materials, Cataloging Policies, and Marketing Patterns. **Library Journal** v. 93: 4345-51, November 15, 1968.

Conference on Junior college libraries, 1967, University of California, Los Angeles. **Junior College libraries: development, needs, and perspectives** edited by E. L. Moore. Chicago, American Library Association, 1969.

Includes several papers of value on audiovisual media.

Conference on the use of printed and audio-visual materials for instructional purposes: first report, prepared by M. F. Tauber and I. R. Stephens. Columbia University, School of Library Service, 1966.

Collection of papers presented at conference. Very useful.

Cornelius, H. F. 'Non-book materials and Australian university libraries'. **Australian Library Journal** v. 20 (9): 20-26, October 1971.

Cox, C. T. 'Cataloging of records'. **Library Journal** v. 85: 4523-5, December 15, 1960.

Provides an interesting comparison with more recent recommendations for the cataloguing of sound recordings.

Cox, C. T. 'Filmstrips: selection, evaluation, cataloging, processing'. **Wilson Library Bulletin** v. 38: 178-82, October 1963.

Includes guides to selection and criteria for evaluation of filmstrips.

Crawford, F. D. **The microfilm technology primer on scholarly journals.** Princeton, N.J. Princeton Microfilm Corporation, 1969.

Criteria relating to educational media programs in junior colleges. Michigan community and junior college library administrators, 1968.

Contents include — Criteria for establishing media programmes in community colleges, the role of media services in curriculum and instruction, and guidelines for establishing a media centre.

Croghan, A. 'Towards a multi-media catalogue'. **Journal of Educational Technology** v. 1 (2): 148-153, May 1970.

Report of an investigation into the possibility of producing a multi-media catalogue in Great Britain and the requirements for producing it.

Crossman, D. M. 'New learning techniques via audio-visual media'. **American school and university** v. 38: 115-116, 122, May 1966.

Brief discussion on the use of new media in education.

Crossman, D. M. 'The remote access audio/video information system'. **Library Trends** v. 19 (4): 437-446, April 1971.

A discussion of remote access information systems and their application in education. Systems at Ithaca College, Oklahoma Christian College, Ohio State University and other educational institutions are described.

Daily, Jay E. 'The selection, processing and storage of non-print materials: A critique of the Anglo-American cataloguing rules as they relate to newer media'. **Library Trends** v. 16: 283-289, October 1967.

Criticism principally of the rules for cataloguing phono records and films provided in the **Anglo-American Cataloging Rules.**

Davis, Harold S. **Instructional materials center, an annotated bibliography.** Cleveland, Ohio, Educational Research Council of Greater Cleveland, 1967.

Annotated bibliography on planning, staffing, and operating instructional materials centres at primary, secondary and tertiary education levels. Includes items published between 1949 and 1966.

Davis, Harold S. **Organizing a learning center.** Cleveland, Ohio, Educational Research Council of America. 1968.

Discussion of the organization of an instructional materials centre. While specifically of interest at the primary and secondary level, the concepts developed deserve consideration by librarians and educators working at the tertiary level.

De los Santos, A. 'Role of the multi-media center in meeting the educational needs of the junior college community'. **Illinois Libraries** v. 51: 49-7, June 1969.

Explores the way in which a multi-media library can best help to achieve the functions of a junior college.

Diaz, A. J. 'Microreproduction information sources'. **Library Resources and Technical Services** v. 11: 211-14, Spring 1967.

A very useful guide to sources of information on microforms.

Drake, H. 'Cataloging recordings'. **Illinois Libraries** v. 46: 145-52, February, 1964.

Cataloguing and classification procedures used at the Illinois State Library for phonorecords.

Dunnetski, S. F. 'Principles of film evaluation for public libraries'. **Illinois Libraries** v. 49: 89-92, February 1967.

Discusses factors to be considered when evaluating films.

Dunnington, D .B. 'Integrating media services'. **R.Q.** (A.L.A. Reference Services Division) v. 9: 116-18, Winter 1969.

An excellent discussion on the integrated catalogue and intershelving of books and non-book materials.

Dupuy, T. N. **Ferment in college libraries: the impact of information technology.** A report to the Trustees of the College of the Potomac. Washington, Communication Service Corporation, 1968.

Essential reading.

Dupuy, T. N. **Modern libraries for modern colleges.** Washington, Communication Service Corporation, 1968.

An extensive discussion of the role of the modern college library. Essential reading.

Dwyer, F. M. **Recent developments and the impact of the newer media.** Paper presented at annual Elementary Principals Workshop (Fifth, University Park, Pa. July 5-15, 1966).

A description of the Instructional Media Centre at Pennsylvania State University.

EFLA Evaluations. New York, Educational Film Library Association. (Monthly).

Eason, T. 'Selected bibliography of A.V. media in library literature, 1958-69'. **Wilson Library Bulletin** v. 44: 312-19, November 1969.

A bibliography of selected material published on audiovisual media. The list is arranged under the following categories —

Acquisitions

Cataloguing and Classification

Reference

Library education

General.

Educare catalogue of educational needs. Knight Howard and Associates, 20 Bridge Street, Sydney. (Annual).

Educational books and equipment. Knight Howard and Associates, 20 Bridge Street, Sydney. (Nine issues per annum).

Educational Media Council. **Educational media index,** New York, McGraw-Hill, 1964.

A guide to the source, content and cost of non-book materials. Superseded by the NICEM Indexes.

'Educational trends and media programs in school libraries'. **A.L.A. Bulletin** v. 63: 221-72, February 1969.

Although the articles comprising this series are oriented towards school libraries, they have considerable relevance for college libraries. A reprint is available from the American Association of School Librarians.

Egan, Mary J. 'Tiptoe in technology'. **School Library Journal** v. 13 (8): 49-51, April 1967.

Discusses the problems one library experienced in developing a non-book collection and the measures taken to overcome the problems.

Ellsworth, R. E. **The school library: facilities for independent study in the secondary school.** New York, Educational Facilities Laboratories, 1963.

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Erickson, C. W. H. **Administering audiovisual services.** New York, Macmillan, 1959.

A comprehensive guide to audiovisual services.

Erickson, C. W. H. **Administering instructional media programs.** New York, Macmillan, 1968.

Comprehensive discussion on the educational and administrative tasks and responsibilities of an instructional media programme director.

Film acquisitions. Canberra, National Library of Australia. Film collection. (Quarterly with annual cumulation).

(Supplements National Library of Australia. **Catalogue of 16 mm films.**)

Film User. Croydon, Surrey. Current Affairs Ltd. (Monthly).

Films for Universities. London, British Universities Film Council Ltd. (New edition proposed for 1971/72).

Forsdale, L. and others. 'Point of view: 8 mm film'. **Drexel Library Quarterly** v. 2: 155-66, April 1966.

The advantages to the library of 8 mm film over 16 mm film and video recordings are outlined. Using the criterion of accessibility, cartridged 8 mm films offer greater reader use potential.

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An excellent bibliography of 300 items concerned with audiovisual media in libraries.

Frederick, F. J. 'Overview of current learning theories for media centers'. **Library Trends** v. 19 (4): 401-409, April 1971.

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French, J. 'Evaluation gap; the state of the art in A/V reviewing, with special emphasis on filmstrips'. **Library Journal** v. 95: 1162-6, March 15, 1970. Comment **Library Journal** v. 95: 1877-8, May 15, 1970.

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Gage, N. L. editor. **Handbook of research on teaching.** Chicago, Rand McNally, 1963.

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Garrick, A. J. 'Tape library index system for language laboratories'. **Australian Library Journal** v. 18: 19-25, February 1969.

A classification scheme developed for the tape collection at the University of New South Wales Institute of Languages is described.

Georgiady, Nicholas P., L. G. Romano and W. A. Wittich. 'Increased learning through the multimedia approach'. **Audiovisual Instruction** v. 12: 250-251, March 1967.

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Gerletti, Robert C. 'Digital apoplexy: certain diagnosis, no easy cure'. **School Library Journal** v. 15 (3), 36-37, November 1968.

The problems of cataloguing non-book materials to meet the requirements of both audiovisual specialist and librarian are discussed. Recommendations for cataloguing are given.

Gillespie, J. T. and E. Cohn. 'Getting started with nonprint media'. **Top of the News** v. 25: 402-5, June 1969.

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Godfrey, Eleanor P. **The state of audiovisual technology — 1961-1966.** Washington, D.C. National Education Association, Department of Audiovisual Instruction, 1967.

Results of a study on the use of audiovisual technology in U.S. schools over a six year period.

The Gramophone. General Gramophone Publications, Kenton, Middlesex (monthly).

Gregory, R. S. 'Acquisition of microforms'. **Library Trends** v. 18: 373-84, January 1970.

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Grove, P. S. and H. L. Totten. 'Bibliographic control of media: the librarian's excedrin headache'. **Wilson Library Bulletin** v. 44: 299-311, Nov. 1969.

Problems of cataloguing non-book materials are discussed.

Guide to Microforms in Print. Washington, Microcard Editions (Annual).

Hamlin, O. and M. D. Sprinkle. 'New concepts of media and their management at the University of Kentucky Medical Center'. **Drexel Library Quarterly** v. 7 (2): 137-144, April 1971.

The internal operations of the Medical Center Library and Communication Systems at the University are described.

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A survey conducted by the committee led it to recommend the development of a standard manual of procedure for cataloguing non-book materials.

Harcleroad, Fred. 'Learning Resources Approach to College and University Library Development'. **Library Trends** v. 16: 228-240, October 1967.

Following a brief introduction to some factors influencing the development of learning resource programmes, descriptions of programmes implemented at several U.S. colleges and universities are provided.

Harcleroad, Fred and others. **Learning resources for colleges and universities.** Hayward, California State College, 1964.

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Hart, G. L. 'Easy and inexpensive AV cataloging'. **Audiovisual Instruction** v. 9: 610-12, November 1964.

Hartz, F. R. and E. A. Pringle. 'Education for instructional materials centers'. **Drexel Library Quarterly** v. 2: 168-75, April 1966.

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Hicks, W. B. and A. M. Tillin. **Developing multi-media libraries.** New York, Bowker, 1970.

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Hicks, Warren B. and A. M. Tillin. **The organization of non-book materials in school libraries.** Sacramento, California State Department of Education, 1967.

A general guide for cataloguing and processing non-book materials.

Hill, D. R. 'The overhead projector in a grammar school'. **Visual education** 2-10, May 1964.

Report of an experiment conducted in the use of overhead projectors in classrooms.

Hodges, Elizabeth D. 'Selecting materials to support the curriculum'. **Childhood education** v. 43: 69-72, October 1966.

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Holdridge, R. E. 'Cataloging non-book material'. **Audiovisual Instruction** v. 12: 358-360, April 1967.

A brief but helpful guide.

Holly, J. F. and D. J. Carnahan. 'Creating a multi-media library: a case study'. **Library Trends** v. 19 (4): 419-436, April 1971.

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How and where directory; an index to sources of information 2nd ed. Sydney, Encyclopaedia Britannica for the School Library Association of New South Wales, 1969.

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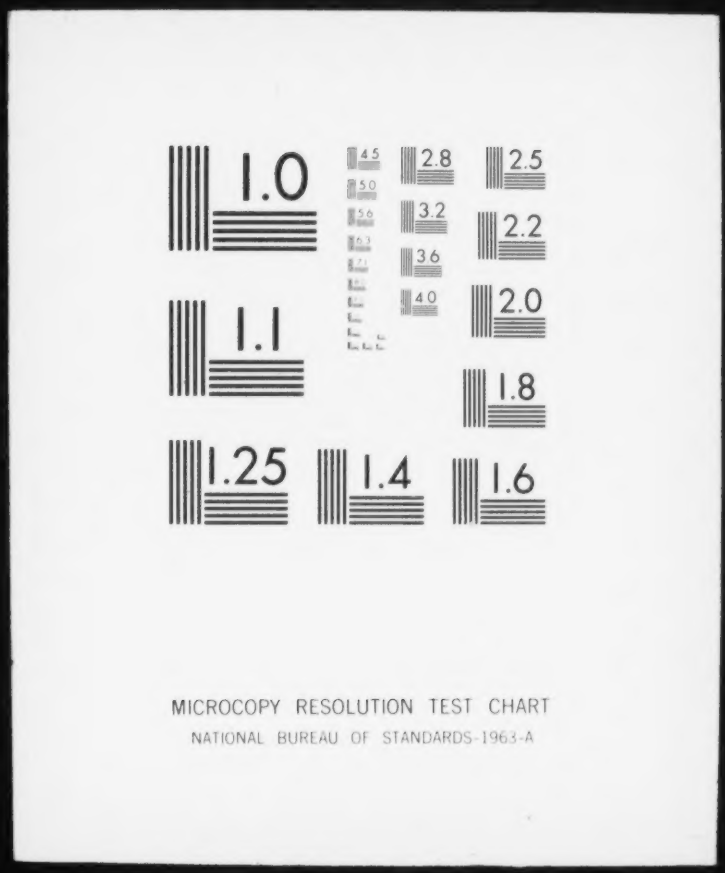

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Kelley, G. B. 'Technological advances affecting school instructional materials centers'. **Library Trends** v. 17: 374-82, April 1969.

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Klein, G. L. and J. D. Hockley. **Television teaching techniques — an introduction.** Adelaide, Department of Education, Audio Visual Education Centre, 1970.

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Knapp, Patricia B. **The academic library response to new directions in undergraduate education.** Minneapolis, Minn. ERIC clearing house on library and information sciences, 1970.

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Laurenta, Sister Mary. 'Classifying and Cataloguing Filmstrips, Records and Tapes'. **Catholic Library World** v. 38 (4), December 1966.

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Lenox, G. J. 'Nonbook materials, recreational reading and faculty reactions to collections in the Center System Libraries'. **Illinois Libraries** v. 49: 827-50, November 1967.

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Levett, J. **The concept of a resource materials centre and some notes on its implications for CAE librarians.** Unpublished paper presented at the Conference of Chief Librarians of Colleges of Advanced Education, Canberra, March 15th-17th, 1971.

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A description of cataloguing art prints and slides using reproductions of the originals on the catalogue cards.

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Library Equipment Institute. St. Louis, Missouri. 1964. **The Library environment. Aspects of interior planning.** Chicago, American Library Association, 1965.

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Library of Congress Catalog. Music and Phonorecords. Washington, Library of Congress (semi-annual).

Limbacher, J. L. 'Film evaluation and criticism'. **Illinois Libraries** v. 46: 121-5, February 1964.

Criteria for film evaluation discussed.

Lowrie, J. E. 'Organization and operation of school library materials centers'. **Library Trends** v. 16: 211-27, October 1967.

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The author explores the role of the professional librarian in a modern multi-media library and assesses its implications in the education of librarians.

McDaniel, R. D. 'Audiovisual reviews: the state of the art'. **Audiovisual Instruction** v. 15: 63-65, December 1970.

Criteria for reviewing publications are given and a critical review of current reviewing publications. The annotated bibliography of reviewing publications is useful for libraries.

McIntyre, Charles J. 'The librarian's role as an educator in the production of non-print materials'. **Library Trends** v. 16: 266-273, October 1967.

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'The marriage of the media'. **Library Journal** v. 93: 2079-2084, May 15, 1968.

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Meaney, J. W. 'The future mixed media library networks'. **Drexel Library Quarterly** v. 7 (2): 153-159, April 1971.

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Moses, D. F. 'A successful mix of libraries and media'. **Drexel Library Quarterly** v. 7 (2): 107-120, April 1971.

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Muller, R. E. 'Multimedia shelving'. **Library Journal** v. 95: 750, February 15, 1970.

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The Musical Quarterly. New York, G. Schirmer Inc.

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NICEM Index to Overhead Transparencies compiled by the National Information Center for Educational Media of the University of Southern California. New York, R. R. Bowker, 1969.

NICEM Index to 16 mm Educational Films, compiled by the National Information Center for Educational Media of the University of Southern California, 2nd ed. New York, R. R. Bowker, 1969.

NICEM Index to 35 mm Educational Filmstrips, compiled by the National Information Center for Educational Media of the University of Southern California. 2nd ed. New York, R. R. Bowker, 1970.

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National Library of Australia. **Catalogue of 16 mm films.** Canberra. National Library of Australia. Film Division. 1960 (1st Supplement 1964).

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Nelsen, E. N. 'Media industry; its growth, structure and role in education'. **Library Journal** v. 95: 1159-61; March 15, 1970.

A view of audiovisual media from the producer's side of the fence. A useful article.

'New A-V technology for wide-angled learning'. **American School and University** v. 39: 23-27, April 1967.

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New building on campus. Six designs for a college communications center. New York, Educational Facilities Laboratories, 1963.

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New rules for an old game. Proceedings of a workshop on the 1967 Anglo-American cataloguing code held by the School of Librarianship, the University of British Columbia, April 13 and 14, 1967. Edited by T. E. Allen and D. A. Dickman, Melbourne, Cheshire, 1968.

Includes a paper by F. B. Field, 'The rules for description and for non-book materials'.

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Description of the library of Launceston Teachers College. This library incorporates a number of audiovisual facilities.

Nitecki, Joseph Z. 'Simplified classification and cataloging of microforms'. **Library Resources and Technical Services** v. 13 (1): 79-85, Winter 1969.

O-P Catalog; out of print books. University Microfilms, 300 North Zeeb Road, Ann Arbor, Michigan, 48107, U.S.A.

Ohm, B. 'Simplified cataloguing: here's one for the record'. **Illinois Libraries** v. 47: 120-3, February 1965.

Description of methods of cataloguing phonodiscs at Illinois State Library.

Pearson, N. P. and L. Butler. **Instructional materials centers: Selected readings.** Minneapolis, Burgess, 1969.

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Peters, William. 'Audio-visual Materials in the Public Library'. **Library Trends** v. 16: 241-250, December 1967.

Discussion on the acceptance of audiovisual materials and equipment in U.S. public libraries.

Phillips, D. 'Expandable classification scheme for phonorecord libraries'. **Library Resources and Technical Services** v. 13 (4): 511-515, Fall 1969.

The classification scheme devised for the phonorecord collection of the Northern Illinois University Library is described.

Pressler, Joan. 'Organizing Library-Based A.V. Materials'. **School Libraries** 43-47, March 1965.

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Pringle, E. A. 'Audiovisual materials and college objectives'. **Choice** v. 3: 1107-9, February 1967.

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Pula, F. J. **Application and operation of audiovisual equipment in education.** New York, Wiley, 1968.

A practical guide for teaching staff.

Queen, H. 'Keeping your audiovisual equipment in repair'. **Illinois Libraries** v. 48 (2): 107-110, February 1966.

Concise guide to the basic maintenance requirements of audiovisual equipment.

Quinly, W. J. 'Carrels for learning'. **Library Trends** v. 19 (4): 467-474, April 1971.

Essential reading for librarians concerned with designing carrels.

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A brief but very useful introduction to the selection and organization of a non-book materials collection.

Ramey, J. W. 'The human element: why nonprint managers turn gray'. **Drexel Library Quarterly** v. 7 (2): 91-106, April 1971.

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Rawkins, Reginald A. 'Don Mills uses Dewey to classify pamphlets'. **Ontario Library Review** v. 50 (1): February 1966.

Describes the method of processing and classifying items for the pamphlet files in the Don Mills Regional Branch of the North York Public Library.

'Regular and super-8 film rated for performance'. **Library Journal** v. 94: 2717, August 1969.

A very brief report on the success of silent standard 8 mm and super 8 mm cartridged films in a number of libraries participating in an experiment.

Rice, S. 'Picture retrieval by concept co-ordination: A self-interpreting file'. **Special libraries** v. 60 (10): 627-634, December 1969.

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Riddle, J., S. Lewis and J. Macdonald. 'Bibliographical chaos and control in the multi-media centre'. **Canadian Library Journal** v. 27 (6): 444-447, Nov.-December 1970.

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Roach, H. **Spoken records.** 3rd ed. Metuchen, N. J., Scarecrow, 1970.

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Roberts, D. 'Special report on library environment through multi media'. **Wilson Library Bulletin** v. 44: 287-325, November 1969.

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Romiszowski, J. **The selection and use of teaching aids.** London, International Text Book Co., 1968.

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Ruark, H. C. 'The IMC: a systematic approach'.**Library Trends** v. 19 (4): 520-523, April 1971.

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Rufsvold, M. I., and C. Guss. **Guides to newer educational media.** 2nd ed. Chicago, American Library Association, 1967.

An excellent guide to the selection aids available for non-book materials.

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Sears list of subject headings. 9th edition. Edited by Barbara W. Westby. New York, H. W. Wilson, 1965.

Serials on microfilm. University Microfilms, 300 North Zeeb Road, Ann Arbor, Michigan, 48107, U.S.A.

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Shaver, John M. and C. Fleetwood. 'The audiovisualist and centralized purchasing'. **Audiovisual Instruction** v. 10: 770-773, December 1965.

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Simons, W. W. 'Choosing audio-visual equipment'. **Library Trends** v. 13: 503-16, April 1965.

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Stereo Review Ziff-Davis Publishing Co., New York.

Stone, C. W. 'AV Task force survey report'. **American Libraries** v. 1: 40-4, January 1970.

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Stone, C. W. 'Planning for media within university library buildings'. **Library Trends** v. 18: 235-45, October 1969.

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Stoops, B. 'Cataloging and classification systems for instructional materials'. **Audiovisual Instruction** v. 9 (7): 427-428, September 1964.

Brief reports on systems employed in several libraries.

Sunder, Mary Jane. 'Organization of Recorded Sound'. **Library Resources and Technical Services** v. 13 (1): 92-99, Winter 1969.

Discusses several classification schemes developed for organizing collections of sound recordings and proposes a further one.

'Survey of microform readers'. **Library Technology Reports,** March 1970.

An extensive range of readers is surveyed and presented in a comparative table. A list of manufacturers and distributors of readers in the United States is provided.

Tauffner, G. E. 'Furniture and related facilities to accommodate multi-media activities in libraries'. **Library Trends** v. 19 (4): 493-507, April. 1971.

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Taylor, E. A. **A manual of visual presentation in education and training.** Oxford, Pergamon 1966.

A practical guide for teachers on the use of audiovisual media.

Taylor, K. I. 'Instructional materials center — a theory underlying its development'. **Wilson Library Bulletin** v. 43: 165-8. October 1968.

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Thomson, J. G. 'Cataloguing of large works on microform in Canadian university libraries'. **Canadian Library Journal** v. 26: 446-52, November 1969.

Results of a survey of Canadian university libraries to establish methods employed to catalogue large works on microform.

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A study of innovative prospects involving the use of new media in 300 colleges and universities in the United States. Useful for methods being developed to employ audiovisual media in college teaching programmes.

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U.S. Library of Congress. Subject Cataloging Division. **Subject headings used in the dictionary catalogs of the Library of Congress.** 7th edition. Edited by Marguerite V. Quattlebaum, Washington, 1966.

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Van Raalte, L. H. 'Audio-visual aids belong in the classroom'. **American School and University** v. 38: 31-32, 62, April 1966.

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Weber, D. C. 'Design for a microtext reading room'. **Unesco Bulletin for Libraries** v. 20: 303-8, November 1966.

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Westhuis, J. L., and J. M. De Young. **Cataloging manual for non-book materials in learning centers and school libraries.** Revised edition. Ann Arbor, Mich., Michigan Association of School Librarians, 1967.

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Williams, B. J. S. **Evaluation of microrecording techniques for information and data storage and retrieval.** Hertis, 1967.

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